

# THE INTERNATIONAL HYDROGRAPHIC REVIEW

Vol. XXXII

N° 2



(N° 58 OF THE SERIES)

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**NOVEMBER 1955**

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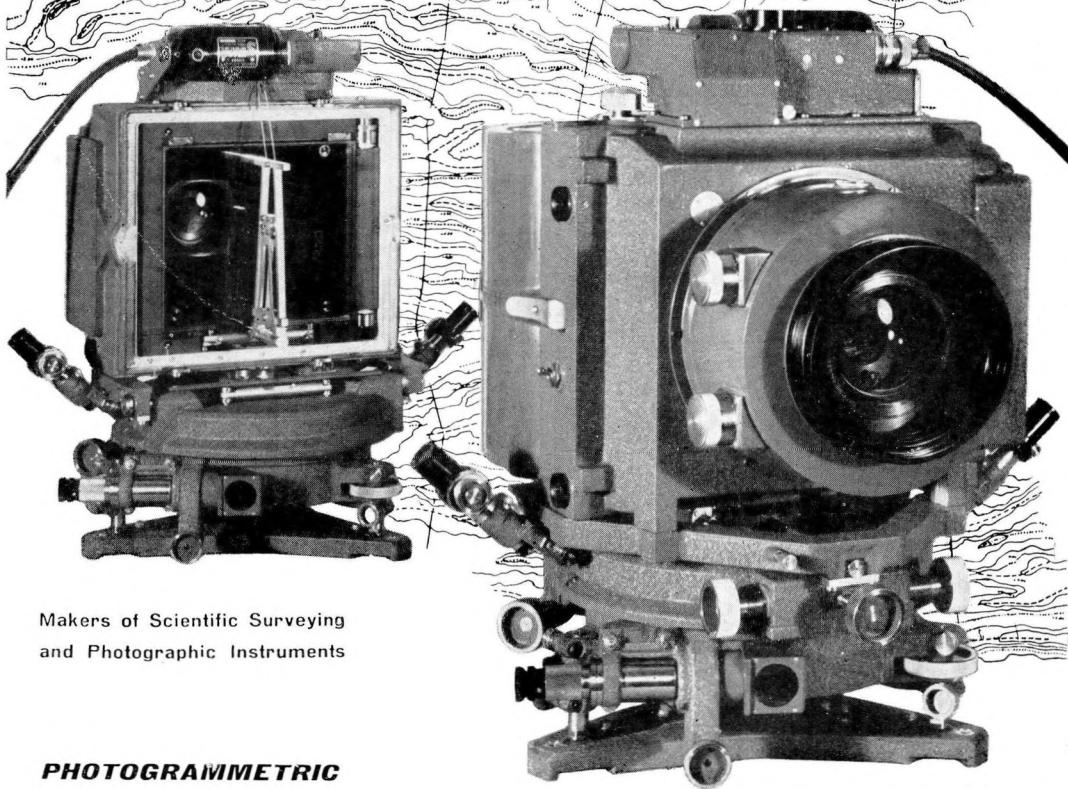
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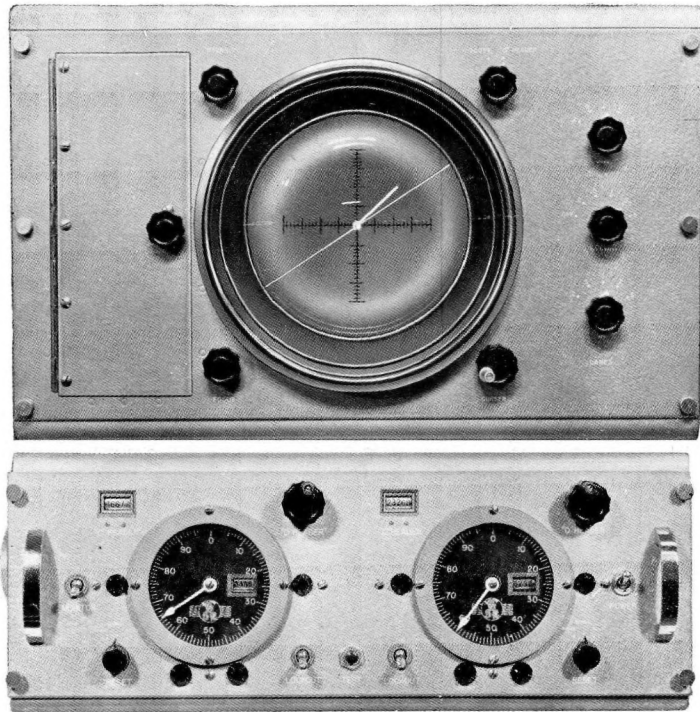
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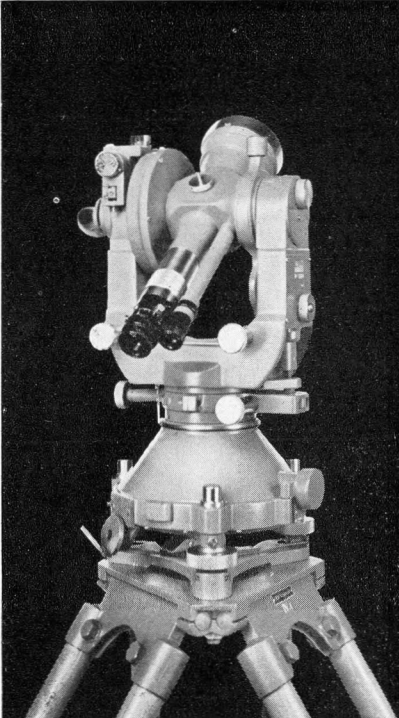
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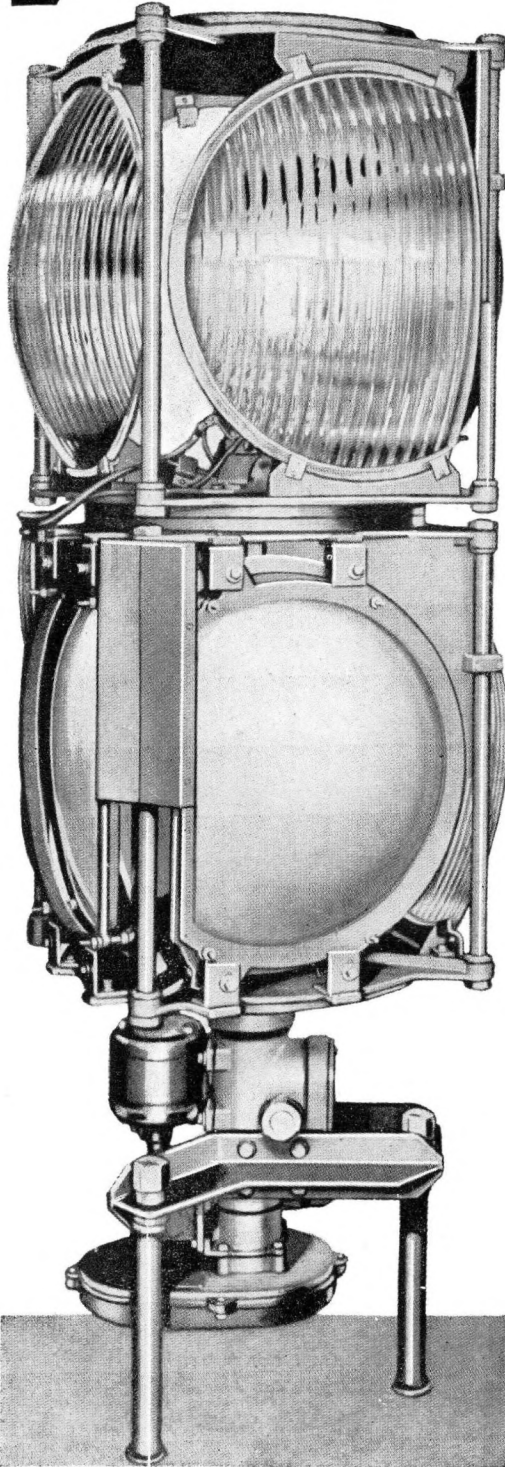
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Crouse-Hinds Type LHB Rotating Lighthouse Beacon is designed to operate unattended at such locations. An automatic lamp changer enables it to operate for at least a month without servicing. This allows the lighthouse keeper to live in safety and comfort on the mainland.

This new beacon is constructed in two decks each of which contains two 24" parabolic mirrors, mounted at 90 degrees to each other so their focal points coincide and a single lamp will produce two beams 90 degrees apart. These two decks are adjustable with respect to each other and rotate together. Lenses are mounted in front of each mirror designed to produce horizontal beam spreads of 6 degrees, 18 degrees, or 36 degrees as desired. The speed of rotation can be 1, 2, 3, 4 1/2, 6 or 12 r. p. m. according to the type of gears installed in the mechanism. The beacons can be arranged for either A. C. or D. C. current and utilize two 1000-watt lamps. There is an automatic lamp changer for each optical system and the lamps which are rated at 500 hours life are automatically replaced when they burn out.

Type LHB is also more efficient than older beacons, giving much higher candlepower from

← **For conversion**

**Crouse-Hinds Type LHB Fixed Mount Lighthouse Beacon for use in existing lighthouses.**

unattended light station with

# CROUSE-HINDS Lighthouse Beacon

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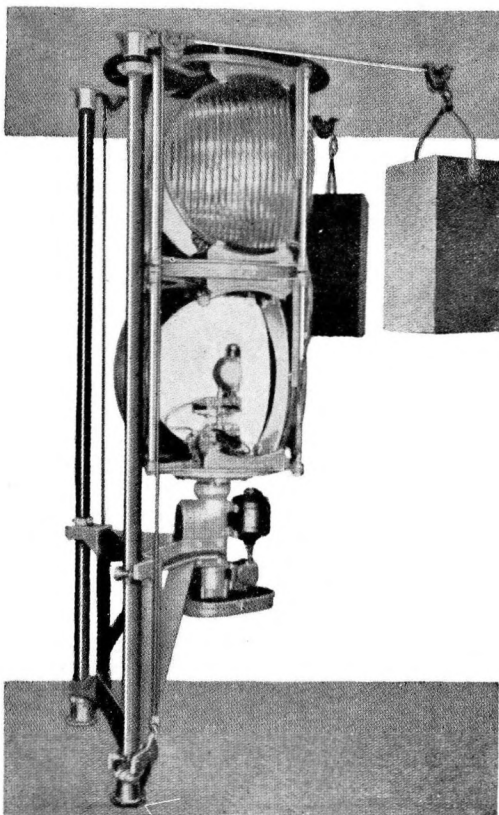
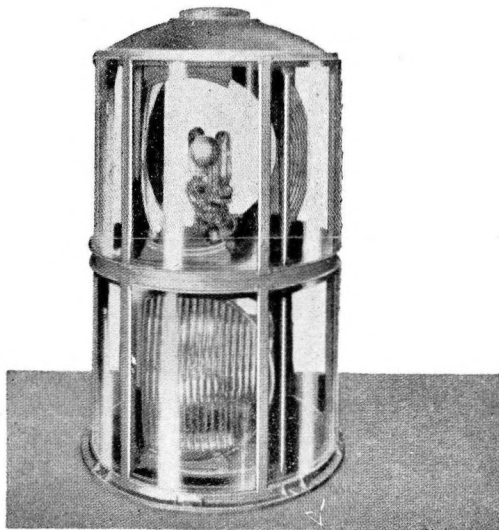
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Crouse-Hinds Type LHB Lowering Mount Lighthouse Beacon. Upper photo shows the beacon raised into the outside lantern. Lower photo shows the beacon lowered into the room below for servicing.



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Published by Pergamon Press, Ltd, 4 Fitzroy Square, London, W. 1.

The Journal *Deep-Sea Research* stresses the processes important to the deep-sea bottom and the organisms dwelling there. An understanding of these may depend on papers only indirectly related to the deep-sea bottom. The editors, therefore, do not discourage the submission of papers on quite diverse subjects.

The Journal is published as a quarterly. The following list of contents of Volume II No. 1 may give an idea of the scope of the Journal:

FRED. B. PHLEGER. — *Scripps Institution of Oceanography*.

Foraminifera and deep-sea research.

CLAUDE E. ZOBELL. — *Scripps Institution of Oceanography*.

Some effects of high hydrostatic pressure on apparatus observed on the Danish Galathea Deep-Sea expedition.

K. F. BOWDEN. — *National Institute of Oceanography, Wormley*.

The direct measurements of subsurface currents in the oceans.

ROBERT B. FISHER. — *Scripps Institution of Oceanography*.

On sounding of trenches.

DAYTON E. CARRITT. — *Chesapeake Bay Institute*.

Atmospheric pressure changes and gas solubility.

RPB. MONTGOMERY AND WARREN S. WOOSTER. — *Brown University*.

Thermostatic anomaly and the analysis of serial oceanographic data.

PAUL FERRIS SMITH. — *Woods Hole Oceanographic Institution*.

Further measurements of the sound scattering properties of several marine organisms.

G. P. D. HALL. — *British Admiralty Hydrographic Department*.

Survey of newly discovered feature (Genista Bank) off the Arabian Coast.

ANTON FR. BRUUN. — *Copenhagen*.

An Oceanographic organisation for the Indo-Pacific region.

ANTON FR. BRUUN. — *Copenhagen*.

Oceanography at the 8th Pacific Science Congress.

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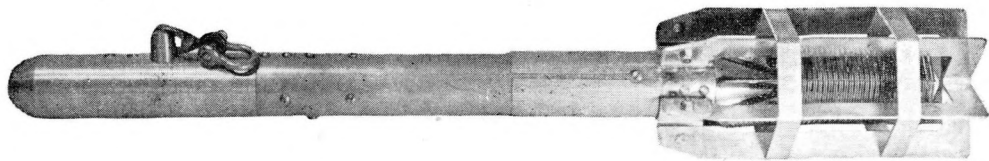
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Wallace and Tiernan  
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	FA-190011	FA-190021
Depth range *	0 to 200 ft.	0 to 450 ft.
Accuracy	2 ft.	4.5 ft.
Temperature range *	+ 30° to + 90° F.	+ 30° to + 90° F.
Accuracy	± 0.1° F.	± 0.1° F.
Maximum allowable depth	225 ft.	562.5 ft.
Length	31"	31"
Diameter : Nose	2 1/8"	2 1/8"
Tail	5"	5"
Weight (pounds)	21 3/4 lb.	21 3/4 lb.
Shipping weight (pounds)	75 lb.	75 lb.
		FA-190031
		0 to 900 ft.
		9 ft.
		+ 30° to + 90° F.
		± 0.1° F.
		1125 ft.
		31"
		2 1/8"
		5"
		22 lb.
		75 lb.

#### ACCESSORIES :

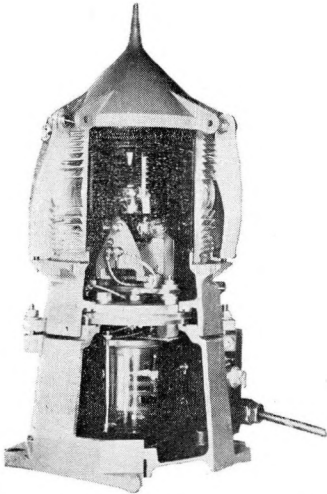
200 smoked glass slides. — Two individually calibrated grids and holders. — Two grid viewers. — Two pts. slide lacquer.  
 — One pt. lacquer thinner. — One slide forceps. — One thermometer. — One nose casting.

\* Temperature and depth may be calibrated in °C and meters, if desired.

The accessories listed above are the same for models FA-190011, FA-190021 and FA-190031, with the exception that a deep diving rig is included with model FA-190031.

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# ELECTRICITY POWERS THE MODERN AID TO NAVIGATION For Lighthouse or Buoy

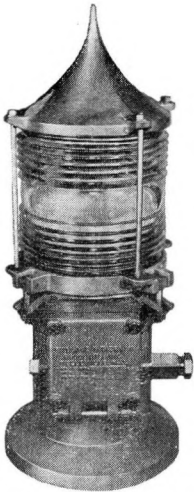


Wallace and Tiernan 200 mm. Lantern cut away to show lamp changer and flasher mechanism

Recognizing the responsibility imposed on marine lights and their accessories, Wallace and Tiernan has, over the years, developed a complete line of modern **electrically powered** aids to navigation meeting all the requirements of unfailing dependability, low initial cost, negligible maintenance and long unattended service periods.

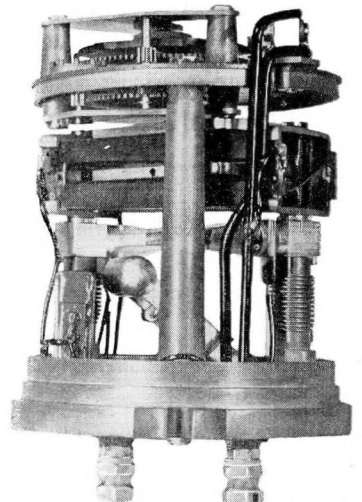
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- Automatic lamp changers.
- Corrosion resistant, water-tight construction.
- Efficient candlepower output high visibility with low power consumption.
- Low initial cost.
- Continuous, unattended operation for long periods.



Wallace and Tiernan 150 mm. Lantern

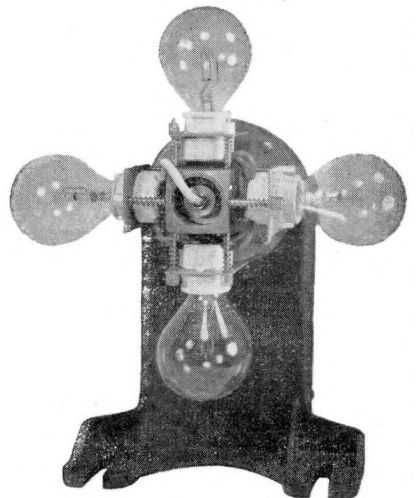
Wallace and Tiernan Specialists on aids to navigation will be glad to make recommendations on your problem without obligation—either on new installations or on the conversion of old gas or oil lights to modern electric operation. Such conversions, utilizing existing optics and structures, are both economical and practical.



Wallace and Tiernan Flasher mechanism

## WALLACE & TIERNAN AIDS TO NAVIGATION INCLUDE :

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|--|----------------------------|
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| · Buoys and Structures.                                  | · Range light lanterns.    |
| · Flasher mechanisms.                                    | · Fog signals.             |
|  | · Batteries of all types.  |



Wallace and Tiernan Lamp changer, for electrifying large optics

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Articles on any branch of hydrographic surveying, navigation and allied subjects, such as radio and other aids to navigation, new instruments, hints to hydrographic surveyors, etc., as well as articles dealing with the history and organization of hydrographic offices with descriptions of surveying ships and boats and their equipment, are of great interest to all Hydrographic Offices.

The Directing Committee of the International Hydrographic Bureau will carefully consider all articles received for publication. Free reprints in English and/or French of original articles will be supplied to their authors on request made when sending manuscript.

Articles should be typewritten if possible in duplicate and addressed to

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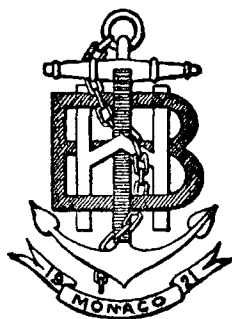
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**MONACO**

**PRINCIPALITY**



**NOVEMBER 1955**

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# ERRATA

## International Hydrographic Review

Volume XXXI, N° 1, May 1954

### THE ANALYSIS OF TIDAL OBSERVATIONS FOR 29 DAYS

The following corrections to his article «The Analysis of Tidal Observations for 29 days» which appeared in the *International Hydrographic Review*, Vol. XXXI, No. 1, May 1954, have been received from Dr Doodson :

#### Page 70 - Table III

	C <sub>po</sub>	D <sub>po</sub>
Amend X <sub>po</sub> , Y <sub>po</sub>	1, 0 ...	0, 1
to read X <sub>po</sub> , Y <sub>po</sub>	1, 1 ...	-1, 1
Amend Interpretation :	C <sub>po</sub> = X <sub>po</sub>	
to read Interpretation :	C <sub>po</sub> = X <sub>po</sub> + Y <sub>po</sub>	

#### Page 71 - Table IV

under Combinations for  $10^6 R \sin r$

	M <sub>m</sub>	M <sub>sf</sub>
Amend X <sub>oa</sub>	1175	- 145
ob	5	1127
to read X <sub>oa</sub>	-1175	+ 145
ob	- 5	-1127

#### Page 72 - Table V

under N<sub>2</sub>, MN<sub>4</sub>, 2MN<sub>6</sub>

Amend w for angle = 190° given as -0.2  
to read -2.2

under same heading

Amend : Angle is (3V for M<sub>2</sub>) minus (3V for N<sub>2</sub>)  
to read : Angle is (3V for M<sub>2</sub>) minus (2V for N<sub>2</sub>)

#### Page 80 - Table 4

Amend R sin r for M<sub>m</sub> and M<sub>sf</sub> = -0.158  
-0.027 respectively  
to read = +0.158  
+0.027

#### Page 81 - Table 5

Left hand column : insert Δ between u and w in each of the three sections.

Under M<sub>m</sub> and M<sub>sf</sub>

Amend r = 268°.7 and 333°.0 respectively  
to read r = 91°.5 and 27°.0

Similarly amend g = 169°.6 and 326°.1 respectively  
to read g = 352°.4 and 20°.1



## ERRATA

### International Hydrographic Review

Volume XXXI, N° 2, November 1954

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#### USE OF RAYDIST SYSTEM IN PORTUGUESE GUINEA SURVEY

---

Page 16 - line 11, should read:

...from A and B as  $\theta_A$  and  $\theta_B$ , we know... etc.

Page 16 - line 7 from bottom, should read:

$$\theta_{BZ} = \theta_B - \frac{2\pi (f + \Delta f)}{c} (r_4) - \varphi(r_4)$$

Page 17 - third line, should read:

$$\alpha_Y = \theta_B - \theta_A - \frac{2\pi (f + \Delta f)}{c} (r_4) + \dots \text{ etc.}$$

Page 17 - line 7, should read:

$$\psi = \alpha_Y - \alpha_X = \theta_B - \theta_A - \frac{2\pi (f + \Delta f)}{c} (r_4) + \frac{2\pi f}{c} (r_3) + \varphi(r_3) - \varphi(r_4) \dots \text{ etc.}$$

Page 17 - line 9 from bottom, should read;  
...while  $r_1$ ,  $r_2$  and  $r_5$  are variable;

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## ERRATA

### International Hydrographic Review

Volume XXXII, N° 1, May 1955, page 175.

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#### SURVEY OF A NEWLY DISCOVERED FEATURE (GENISTA BANK) OFF THE ARABIAN COAST

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Paragraph beginning 12th line from the bottom should read as follows:

« The 40-fathom depth reported by H.M.S. Genista is virtually disproved,  
« and it seems probable that the echoes obtained on that occasion resulted from fish,  
« eddies, or other aqueous phenomena, a number of false echoes also being observed  
« and remarked on by H.M.S. Owen. »

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