

DEPARTMENT OF COMMERCE

BUREAU OF STANDARDS

WASHINGTON

CORRECTION SHEET

For First Edition (March 23, 1918)
of Bureau of Standards Circular No. 74,
"Radio Instruments and Measurements."

Page

- 8, line 1. For "as" read "or."
- 8, line 15. Should read "electrons are, so far as known, strictly identical, and, for ease of"
- 8, line 16. After "calculation" insert "are"
- 21, Fig. 6. The slip-rings should be marked A, A,
- 28, Fig. 12. On the hypotenuse, the expression under the radical sign should be $R^2 + \omega^2 L^2$
- 61, Fig. 43. On the scale of abscissas, the values given should be 0.5, 1.0, 1.5, 3.0, 2.5
- 62, line 14. Reference should read "La Lumière Électrique, 53, p. 241; 1916."
- 64, Equation 50. Should read $L_a = \frac{L}{1 - \omega^2 C_o L}$
- 37, Fig. 51. The condenser marked C should be marked C₁. The whole of the main coil should be marked L. The upper section of L should be marked L. The lower three sections of L should be marked L'.
- 37, line 25. The last word in the line should be "in".
- 37, Fig. 52. The coil on the right of the figure should be marked L' instead of L₁.
- 37, line 32. For L' read L₁.
- 38, line 10. For Fig. 51 read Fig. 53(a).
- 36, line 11. For Fig. 52 read Fig. 37.
- 70, line 19. For "in" read "is".

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71, line 15. For "are" read "is".

73, line 24. For Z_1 read X .

74, Fig.61. The curves should be labeled X instead of Z .

74, Fig.61. The value of C_0 should be 0.0008 microfarad.

75, line 8. The equation should read

$$f = \frac{m}{4 \sqrt{C_0 L_0}}$$

76, line 5. For L_0 read L .

76, Fig.62. On the curves, for Z read X , and for Z_L read X_L .

76, Fig.62. The value of C_0 should be 0.0008 microfarad.

78, Fig.63. On the curves, for Z read X , and for Z_C read X_C .

78, Fig.63. The value of C_0 should be 0.0008 microfarad, and the value of C should be 0.0005 microfarad.

78, last line. For "parabola" read "hyperbola".

84, Fig.65. The inductance coil in series with the antenna should be marked L .

87, Fig.67. On the upper envelope of the wave train, the upper point should be marked A , the middle point B , and the lower point C .

93, Fig.69. In circuit I, for e read E .

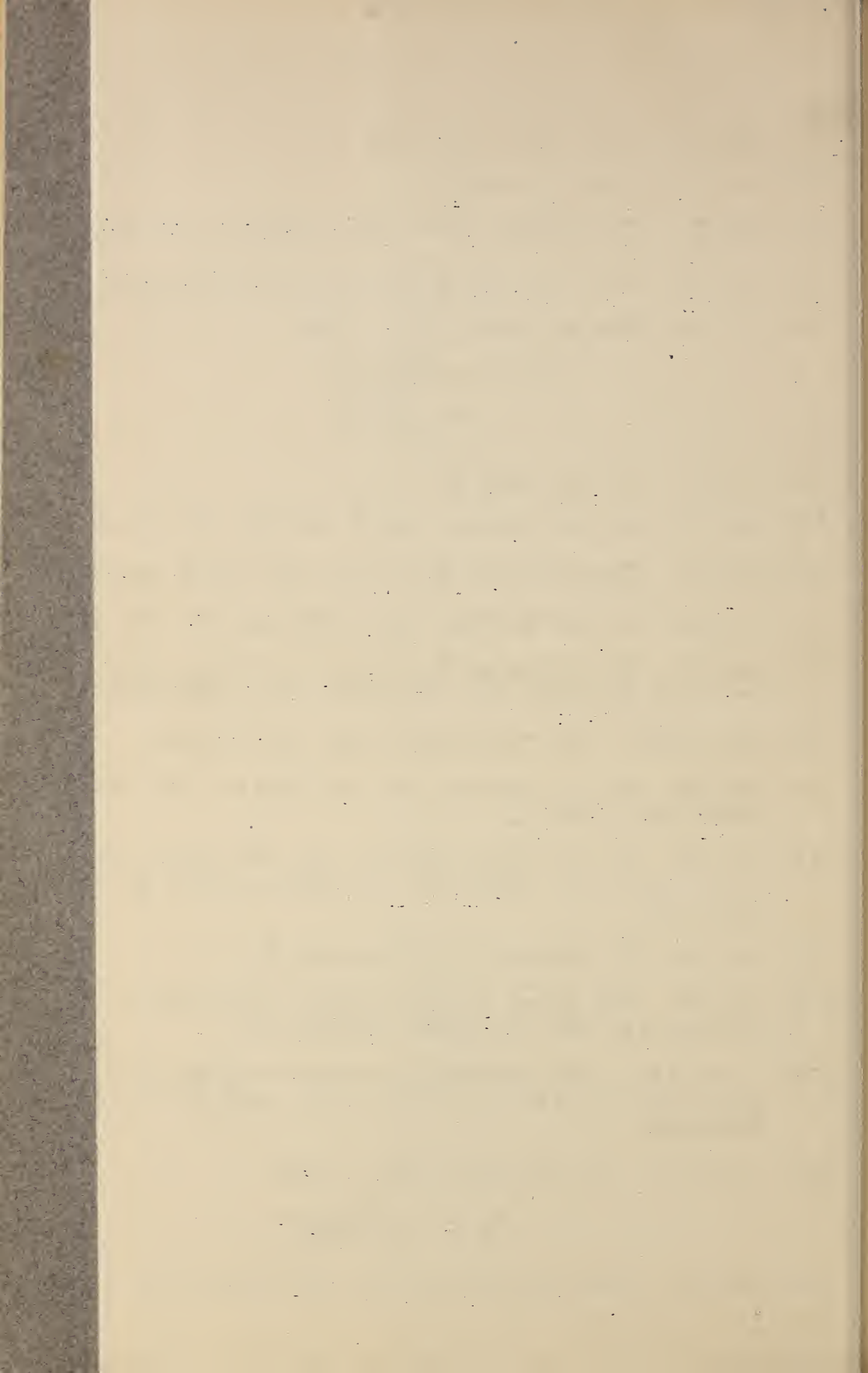
108, Fig.77. The upper circuit should be marked I, the middle circuit II, and the lower circuit III.

128, In Table 3, the numbers, inequality signs, and minus signs, appearing to the right of ω or λ , should all be in the exponent.

137, line 23. The equation should read

$$L_x = \frac{\lambda^2}{3.553 \cdot C_x}$$

142, Fig.97. The (horizontal) hot wire should be marked A .



Page 150, line 9. The equation should read

$$\frac{I_1^2}{I_2^2} = \frac{R_2^2 + \omega^2 L_2^2}{R_1^2 + \omega^2 L_1^2}$$

150. In the last equation on the page, for I_m read I_M .

151. In the first and second equations on the page for I_m read I_M .

151, line 23. The sixth word in the line should be "possibilities"

152, line 9. The equation should read:

$$\omega MI_1 = I_2 \sqrt{R_2^2 + \omega^2 L_2^2}$$

169, Fig.132. The resistance in shunt with the telephone receivers should be marked g.

179. In equation (79) insert the fraction bar in the fraction

$$\frac{I_M}{I_1}$$

182, line 5. For "soil" read "coil".

187. In equation (100), in the denominator of the expression under the radical sign, for I_1 read I_1^2 .

193, line 8. The line should read "to the square of the setting, at constant frequency."

195. Equation (107) in the denominator, for ω_r read ω_r

199, line 13. After "setting" insert comma.

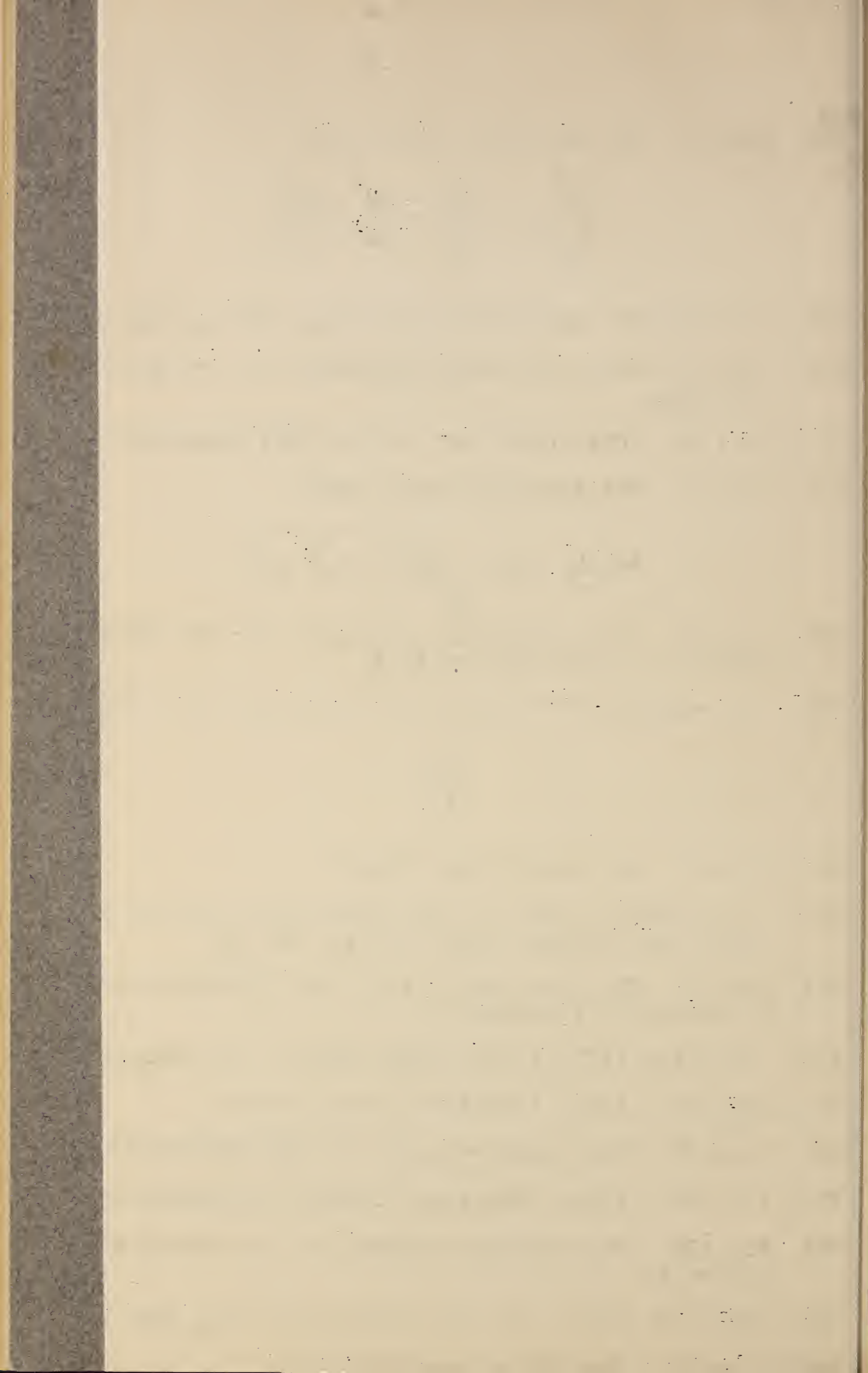
199, line 27. The ninth word in the line should be "measurements"

219, line 24. After "obtained" change the period to a comma.

227, Fig.166. The armature contact of the buzzer should be marked A.

239, Equation (135). In the equation for P_{11} , for k read k_1 .

244, line 28. For 200 oh read 206.25 oh



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244, last line. Read

$$\frac{4L}{d} = 3300, \log_{10} 3300 = 3.51851$$

245, line 3. For $\log_e 3200$ read $\log_e 3300$.

248, line 19. The exponent should be raised to the proper position in $\left(\frac{D}{2h}\right)^2$

255, line 8. Delete $A_g = 0.693$

255, line 15. Should read "so that the correction is $(0.01257)(30)(13.70)(0.288) = 1.35 \mu h$ "

256. In the table, in the column headed D, the fourth item should be 0.318 instead of 0.388.

259, line 19. For 17269 read 0.17269.

259, line 20. For 104 read 0.00104.

259, line 21. Move to the right the quantity

$$\frac{0.09}{16} 0.816, \text{ which is equated to } 0.0046$$

261, Fig.184. For b read c

261, lines 9-11. Read "The correction for cross section may, in each case, be made by adding $0.01357 \mu a (A_1 + B_1)$ to the value of inductance for the equivalent coil."

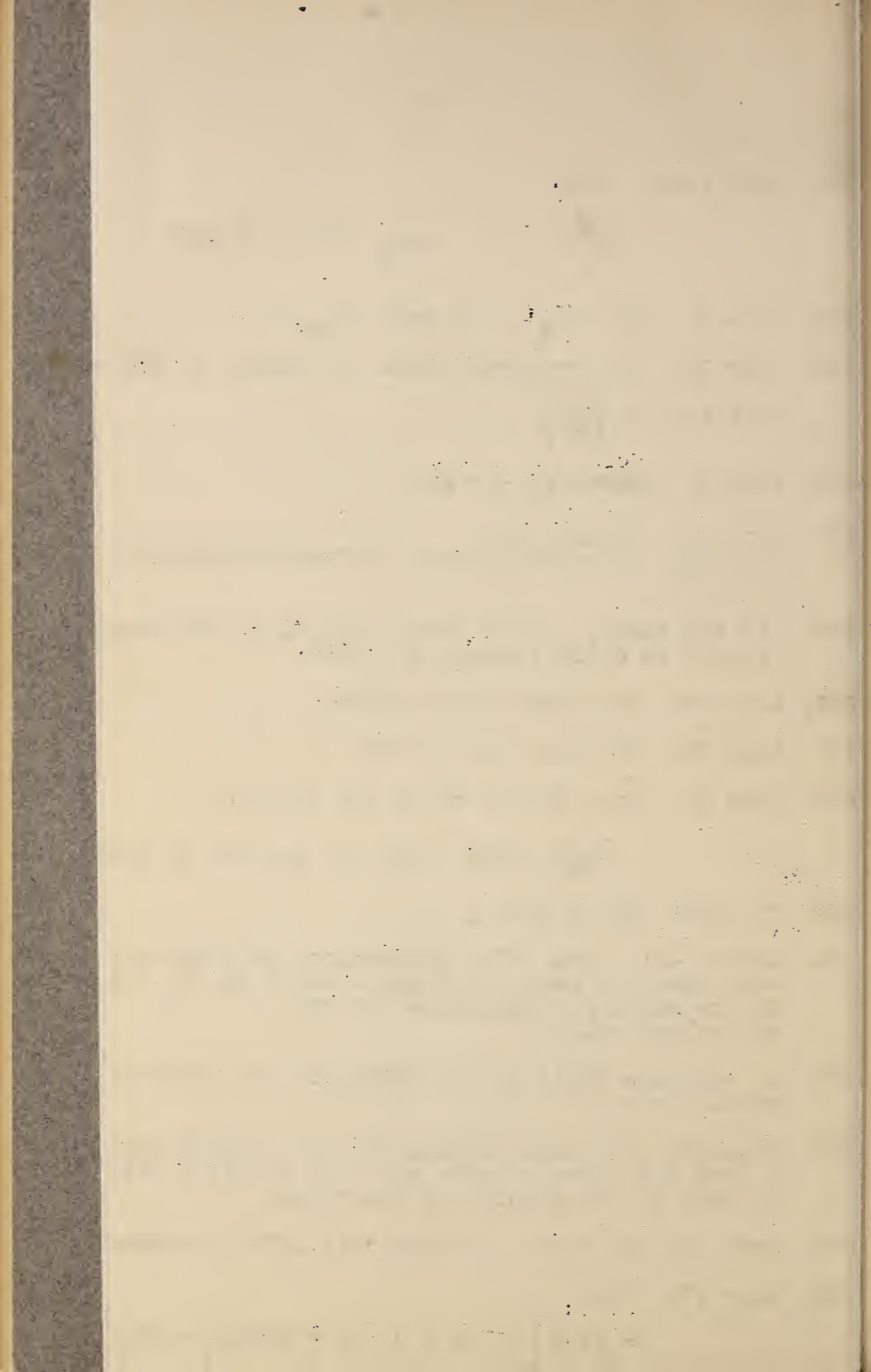
262. In equation (162) the numerator of the first fraction should be $n-1$

263, Fig.187. The line showing the dimension b should extend beyond the wires at each end of the coil a distance equal to half of the spacing of the wires.

263, next to last line. Enclose "Fig.187" in parentheses.

264, line 17. Read

$$= 12.8 [3.915 + 0.726 + 0.004] = 59.43 \text{ microhenries.}$$



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270. Equation (174) should read

$$\underline{M} = 0.002 \left[2.303 \ell \log_{10} \frac{\ell = \sqrt{\ell^2 + D^2}}{D} + D - \sqrt{\ell^2 + D^2} \right]$$

271, Fig.193. For B' read B. For B read B'.

274. In equation (185) delete the 2 appearing before each of the two expressions in parentheses on the right-hand side of the equation.

275. The last word in the title of Fig.200 should be "section."

281. In the title of Fig.205, the next to the last word should be "being."

281, line 23. Space should be inserted to separate the two equations

$$g = \sqrt{250} \quad \text{and} \quad \frac{a^2 A^2}{g^4} = \frac{4}{625}$$

282. Fig.206 is inverted. The next to the last word in the title of Fig.206 should be "being"

284. Title of Table 12 should read "Values of Correction B in Formulas (155), (165), (168), and (169)."

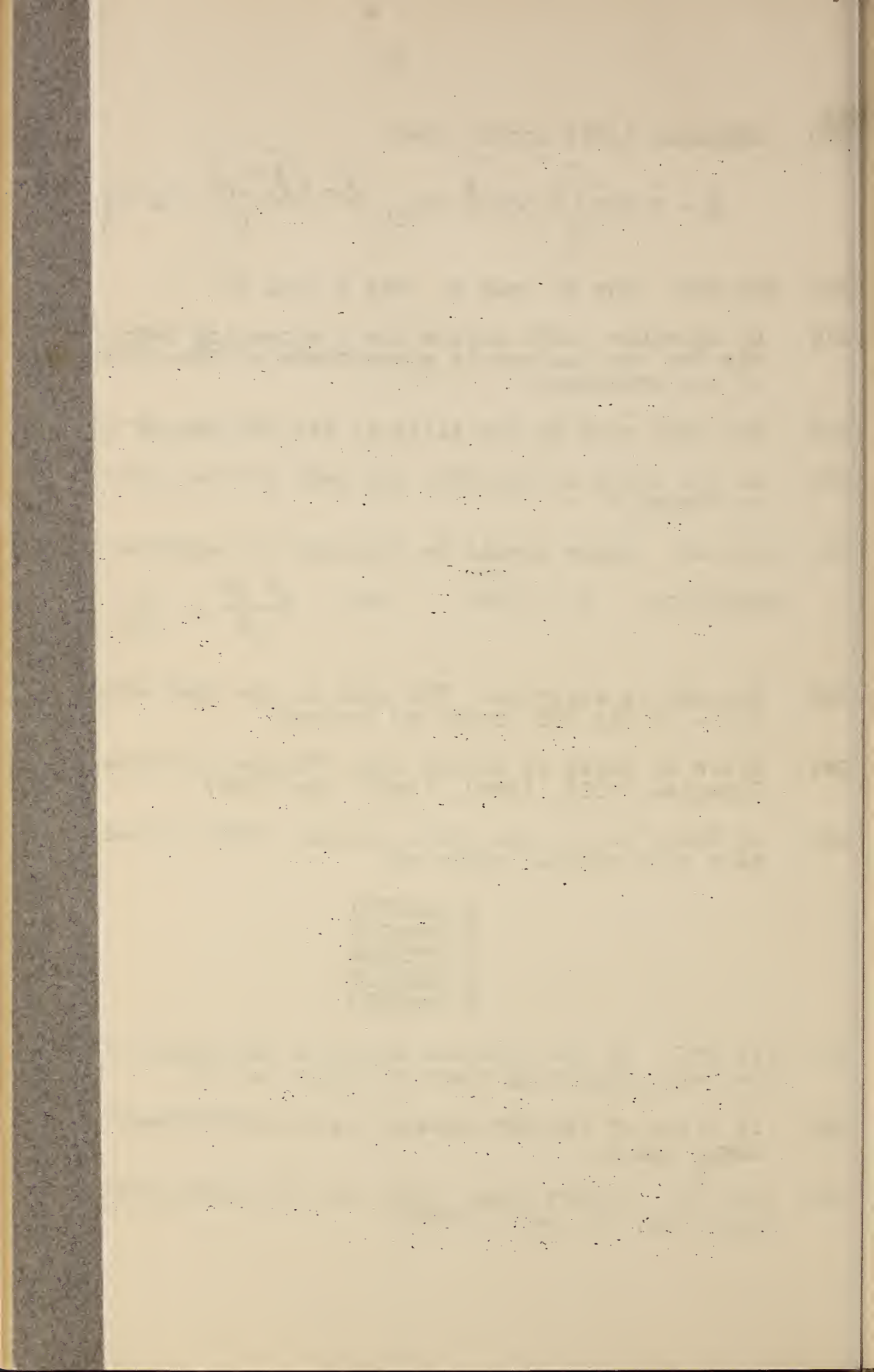
286. In Table 16, in the fifth column, which is headed F, the last five values should be

- 0.0010741
- 0.0010010
- 0.0009306
- 0.0008626
- 0.0007973

288, Fig.207. In the vertical scale on the right of the figure the value appearing above \surd should be 1.5

289. In title of Fig.208 delete the bracket appearing between \log_{10} and f.

295, line 13. Insert minus sign over the characteristic of the logarithm, to read $\bar{1}.13265$



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300. Equation (207) should read

$$\underline{x} = \pi d \sqrt{\frac{2 \mu f}{1000 \rho}}$$

300. Equation (208) should read $\alpha_c = 0.01071 \sqrt{f}$

312. Equation (229) should read

$$\lambda_m = \frac{1.884 \times 10^9}{\omega}$$

315. In equation (253) the exponent should be $\frac{3}{2}$

315. In equation (255) for I read I^2

321, (facing). Fig.220 should be turned through 90° .
The bottom of the figure now appears on the right.

324, line 38. For "Atlernating" read "Alternating"

329, line 21. For "Labaratory" read "Laboratory."

333. In the second column, the first word should be "Conductors,"



Let $\triangle ABC$ be a triangle. Let D be a point on the side BC . Let AD be a line segment connecting vertex A to point D . Let E be a point on the side AC . Let BE be a line segment connecting vertex B to point E . Let F be a point on the side AB . Let CF be a line segment connecting vertex C to point F . Let AD , BE , and CF be concurrent at a point G . Let H be a point on the side BC . Let AH be a line segment connecting vertex A to point H . Let I be a point on the side AC . Let BI be a line segment connecting vertex B to point I . Let J be a point on the side AB . Let CJ be a line segment connecting vertex C to point J . Let AH , BI , and CJ be concurrent at a point K . Let L be a point on the side BC . Let AL be a line segment connecting vertex A to point L . Let M be a point on the side AC . Let BM be a line segment connecting vertex B to point M . Let N be a point on the side AB . Let CN be a line segment connecting vertex C to point N . Let AL , BM , and CN be concurrent at a point O .