APPENDIX B.

To find tension of cables:

Let x represent deflection.

y " half the span.

W " weight of cables and load equally distributed.

T " tension resulting,

and the following formula will give the value of tension.

$$T = \frac{W}{4x} \sqrt{4x^2 + y^2}$$

Substitute for x, 59 and y, 410.66, and

$$T = \frac{W}{4 \times 59} \sqrt{4 \times 59^2 + 410.66^2}$$

or $T = W \times 1.81$.

The tension of the cables therefore will be obtained by multiplying the weight W by the factor 1.81.

APPENDIX C.

The length of span and deflection being known, to find the length of the cable, calculated as a parabola:

Let y express half the length of span.

" x " deflection.

" z " half the length of cable.

Then $$Z = \sqrt{y^2 + \frac{4}{3} x^2}$$

The following formula will give deflection when length of span and of cable are known.

$$X = \sqrt{\frac{3}{4} (z^2 - y^2)}$$

THE END.