



Tinsley & Co. , London



- **Historical Context:**

- Vintage electrical instrument used extensively in early 20th-century scientific laboratories.
- Invented and manufactured by Tinsley & Co., a London-based manufacturer of precision electrical instruments in the 19th century.

- **Primary Function:**

- Precise measurement of electric potentials (voltages).
- Achieved by comparing unknown voltages to a known reference voltage.

- **Operating Principle:**

- Operates on the principle of balancing voltage drops.
- Allows for accurate determination of unknown voltage values.

- **Period of Use:**

- Widely used until the mid-20th century.
- Replaced by digital voltmeters and other modern measuring devices.

- **Significance:**

- Played a crucial role in scientific research.
- Essential for calibration tasks.
- Contributed significantly to the electrical engineering industry.

- **Instructions for Use:**

- Circuit Setup:
- Connect a known reference cell to the potentiometer terminals designated for reference.
- Calibration:
- Calibrate the instrument to ensure accurate output.
- Unknown Voltage Connection:
- Disconnect the reference cell.
- Connect the unknown voltage source to the appropriate terminals.
- Voltage Reading:
- Read the dials to accurately determine the voltage value.
- The sum of dial settings represents the measured voltage of the unknown source.
- Recording and Calculation:
- Record the readings.
- Calculate the voltage based on the provided calibration scales.
- Resetting:
- Reset the instrument for the next measurement.

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### References:

1. [https://tinsley.co.uk/wp/?page\\_id=419](https://tinsley.co.uk/wp/?page_id=419)
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