

WESTON

Measuring Invisibles

EDWARD WESTON—1850-1936

NO biographer has yet chosen to tell the story of Edward Weston's life and his contributions to electrical science. Like that of many other great inventors his work remains buried in the papers and reports and patents of the 19th century, unknown to a public which for years has read of the careers and findings of such men as Fulton, Marconi, Edison, Westinghouse and the Wright brothers. And no attempt has been made in these pages to do more than sketch in the outline of Weston's life, suggesting his accomplishments rather than fully describing them for the sake of future historians of this country's inventions and inventors. But for those who are interested in scientific pioneers, the following list of 25 Weston achievements will serve to show the originality of the man whose name now appears on 309 patents in the United States Patent Office.

Edward Weston was the man who:

1. Applied the dynamo to electroplating (1872).
2. Patented an anode for making malleable plated nickel (1875).
3. Patented the rational construction of dynamos (1876).
4. Patented laminated pole pieces and cores for dynamos, raising their efficiency from about 45 per cent to 85 per cent (1875).
5. Gave a public exhibition of arc lighting in the United States (1877).
6. Used the arclight for general lighting purposes (1877).
7. Opened a commercial arc light factory in the United States (1880).
8. Used a soft metal core for arc light carbons (1878).
9. Copperplated the ends of arc light carbons (1878).
10. Used an electric arc furnace industrially in the United States (1875).
11. Used the dynamo as an electric motor for industrial purposes (1878).
12. Made a successful homogeneous carbon lamp filament (1885).
13. Cured weak spots in carbon lamp filaments with hydrocarbon flashing process (1885).
14. Made nitrocellulose into pure fiberless cellulose (1885).
15. Made a truly permanent magnet (1887).
16. Compounded a German Silver alloy containing 30 per cent nickel (1887).
17. Made a metal having a negative temperature coefficient (1887).
18. Made a metal having an extremely low temperature coefficient (1887).
19. Made an aluminum alloy which could be drawn to very thin tubes (1887).
20. Used a metal frame for damping the motion of moving coils (1887).
21. Made a commercial, direct-reading electrical measuring instrument (1888).
22. Used the shunt circuit (1893).
23. Made a stable cell for use as a secondary standard of the volt (1893).
24. Developed the magnetic drag-type speedometer (1885).
25. Made an ammeter for use with automobile starting batteries (1911).