
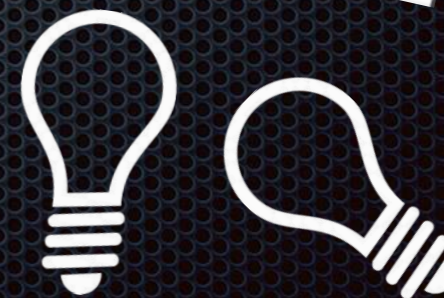


# ELECTRIC LIGHT BULB



THE PRESENTATION WAS MADE BY PAVLOVA VICTORIA  
FORM 10  
SCHOOL No 33  
TEACHER PITKOVA SVETLANA NIKOLAEVNA



# PLAN:

1. WHAT IS THE INVENTION?

2. BULB DESIGN BASICS.

3. HISTORY

4. WHY WAS THE INVENTION NECESSARY?

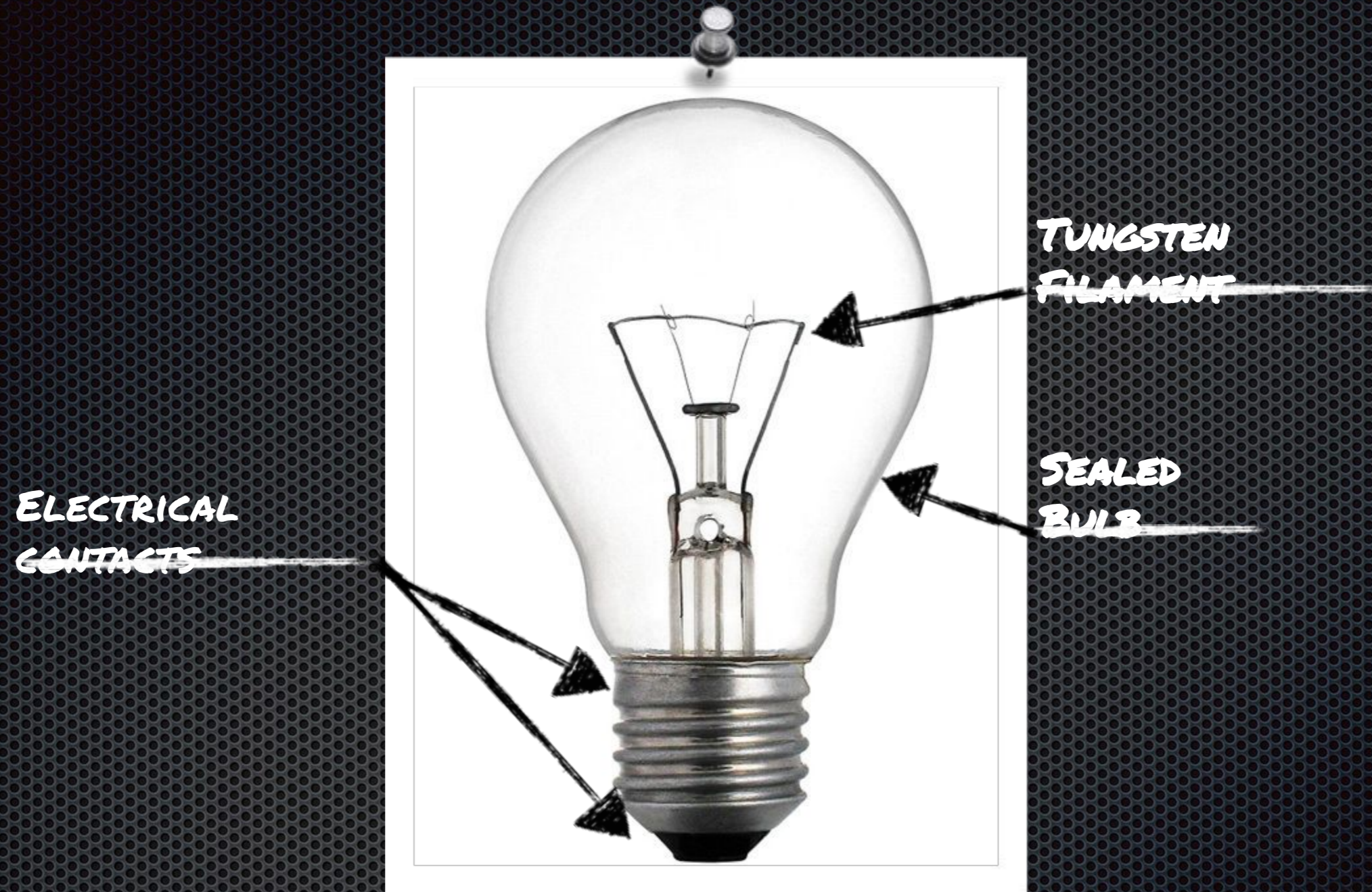
5. HOW DID THE INVENTION OF LIGHT BULBS CHANGE PEOPLE'S LIVES TODAY?

6. RESOURCES



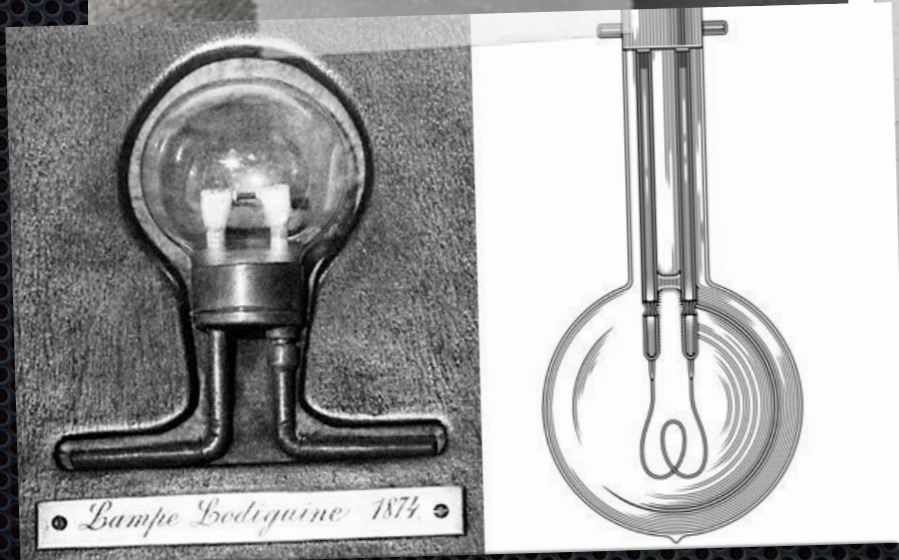
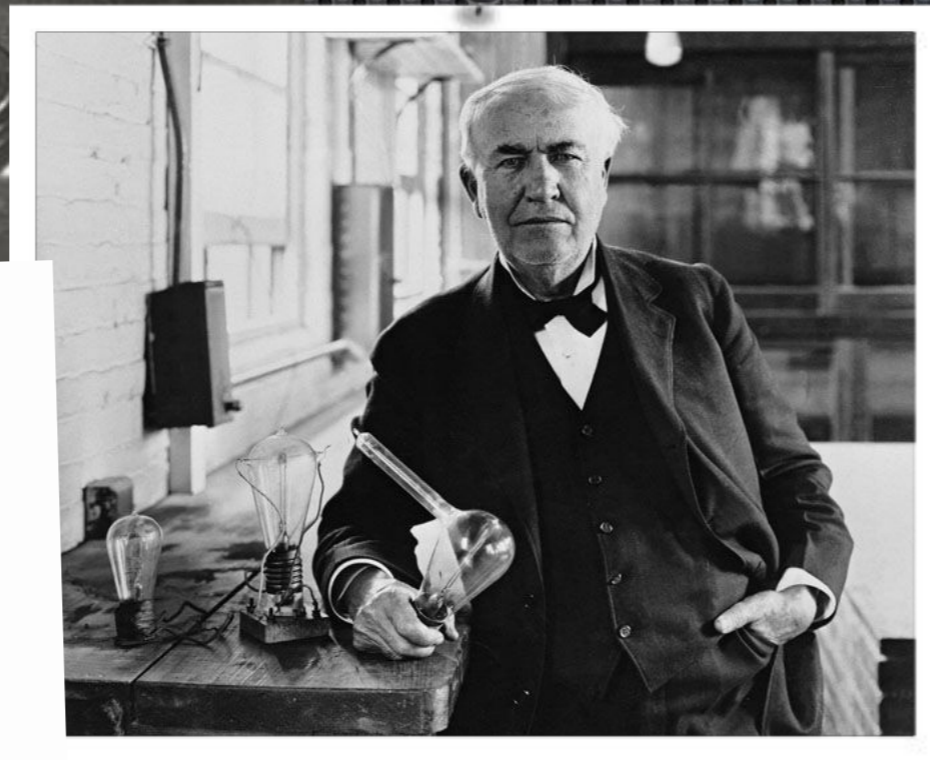
# ELECTRIC LIGHT BULB





## BULB DESIGN BASICS

LOOK!  
THE FIRST LIGHT BULB  
LOOKED  
LIKE THIS!



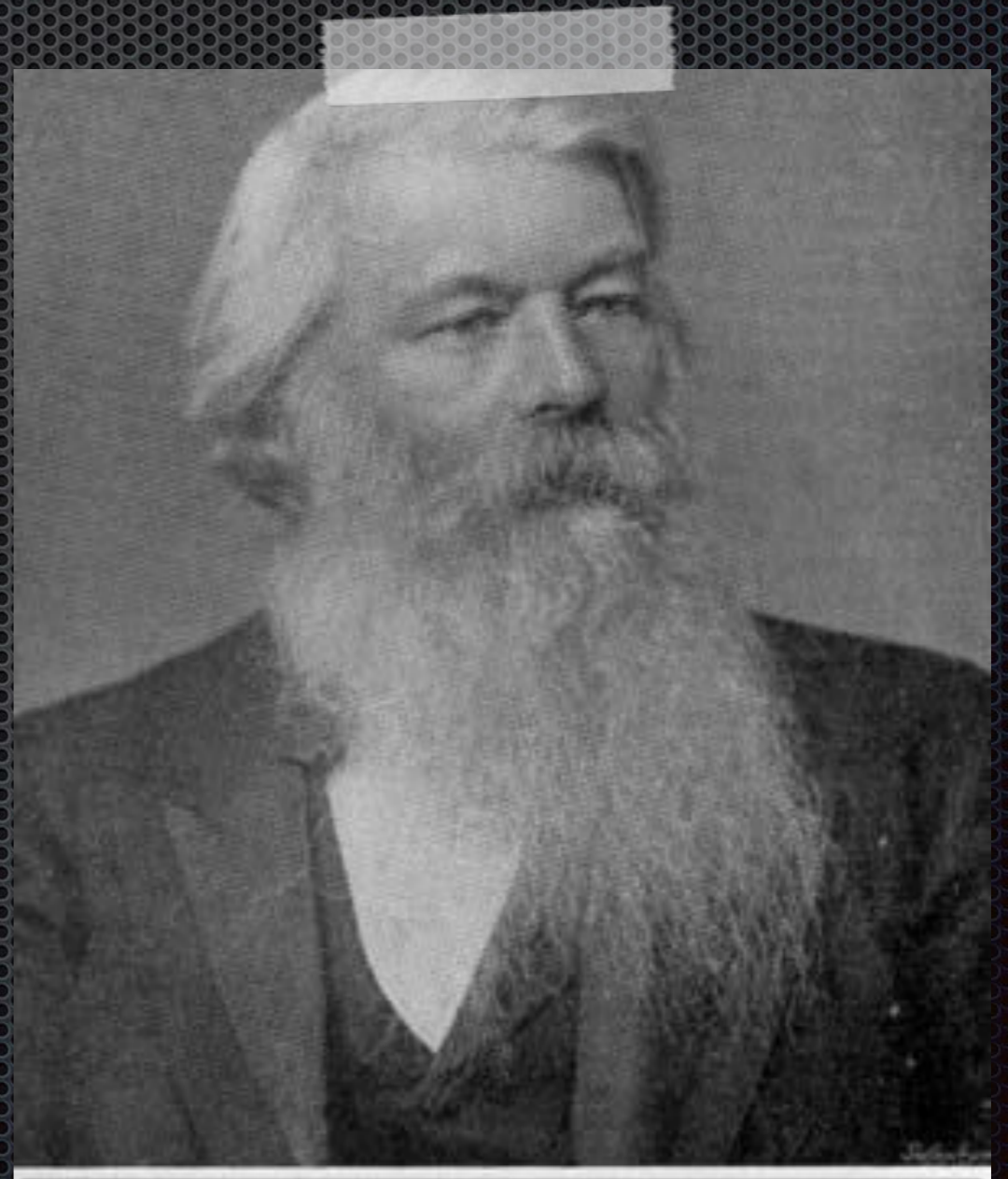
# HISTORY

THE FIRST ELECTRIC LIGHT  
WAS MADE IN 1800 BY  
HUMPHRY DAVY, AN ENGLISH  
SCIENTIST. HE EXPERIMENTED  
WITH ELECTRICITY AND  
INVENTED AN ELECTRIC  
BATTERY. WHEN HE CONNECTED  
WIRES TO HIS BATTERY AND A  
PIECE OF CARBON, THE CARBON  
GLOWED, PRODUCING LIGHT.  
THIS IS CALLED AN ELECTRIC  
ARC.



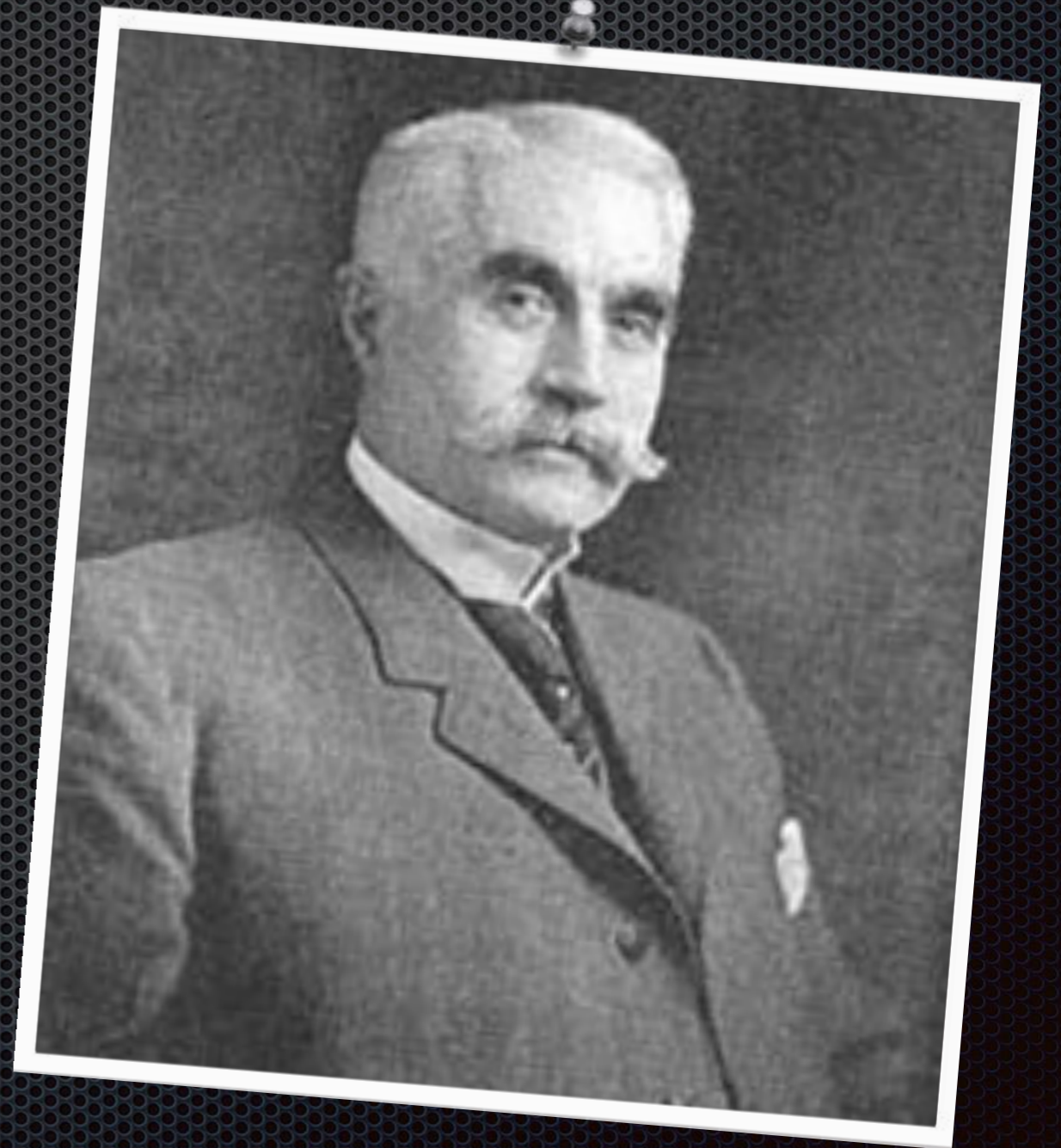
# HISTORY

MUCH LATER, IN 1860, THE  
ENGLISH PHYSICIST SIR JOSEPH  
WILSON SWAN WAS  
DETERMINED TO DEVISE A  
PRACTICAL, LONG-LASTING  
ELECTRIC LIGHT. HE FOUND  
THAT A CARBON PAPER  
FILAMENT WORKED WELL, BUT  
BURNED UP QUICKLY. IN 1878,  
HE DEMONSTRATED HIS NEW  
ELECTRIC LAMPS IN NEWCASTLE,  
ENGLAND.



# HISTORY

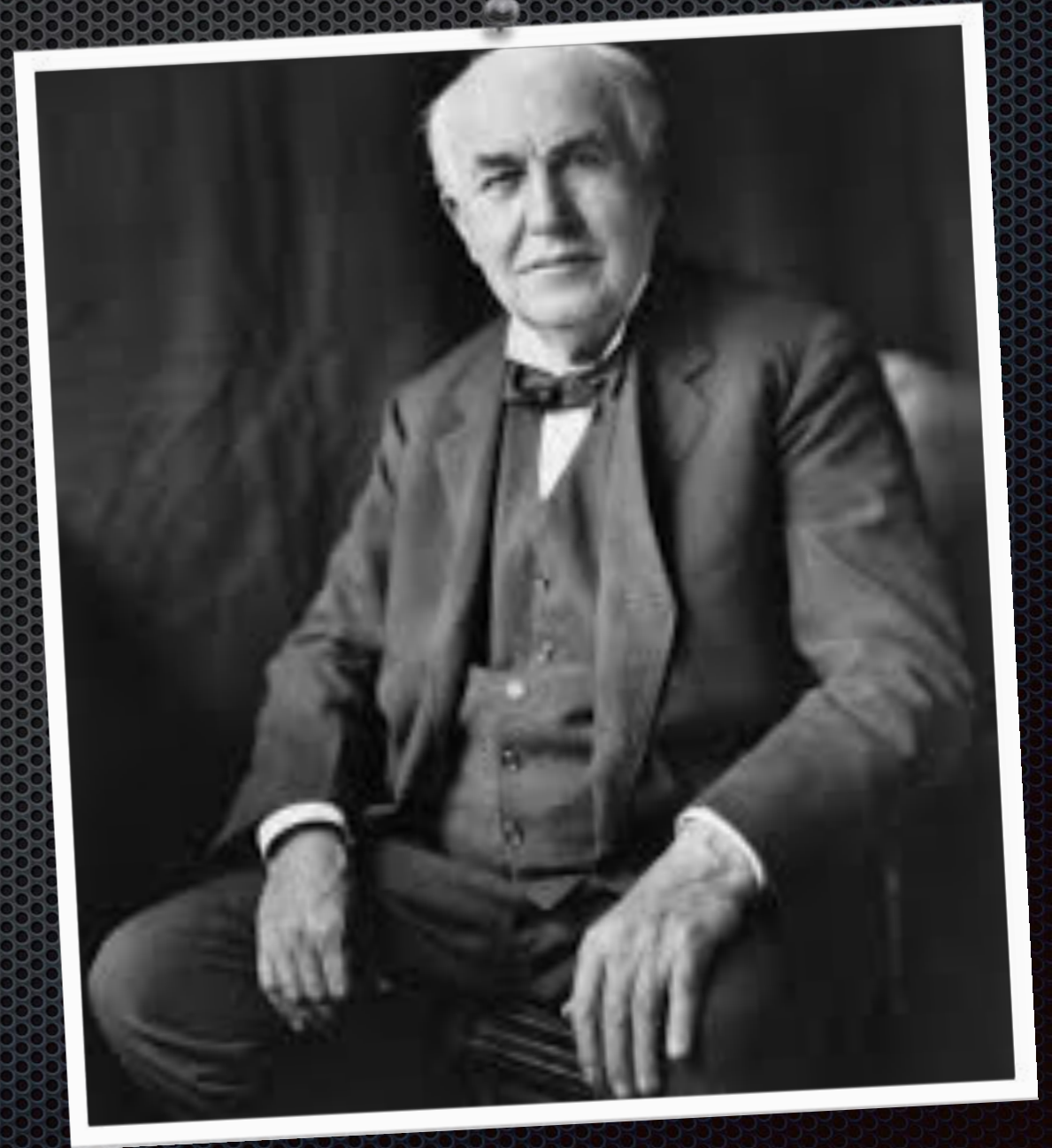
IN 1877, THE AMERICAN  
CHARLES FRANCIS BRUSH  
MANUFACTURED SOME CARBON  
ARCS TO LIGHT A PUBLIC  
SQUARE IN CLEVELAND, OHIO,  
USA. THESE ARCS WERE USED  
ON A FEW STREETS, IN A FEW  
LARGE OFFICE BUILDINGS, AND  
EVEN SOME STORES. ELECTRIC  
LIGHTS WERE ONLY USED BY A  
FEW PEOPLE.





# HISTORY

THE INVENTOR THOMAS ALVA EDISON (IN THE USA) EXPERIMENTED WITH THOUSANDS OF DIFFERENT FILAMENTS TO FIND JUST THE RIGHT MATERIALS TO GLOW WELL AND BE LONG-LASTING. IN 1879, EDISON DISCOVERED THAT A CARBON FILAMENT IN AN OXYGEN-FREE BULB GLOWED BUT DID NOT BURN UP FOR 40 HOURS. EDISON EVENTUALLY PRODUCED A BULB THAT COULD GLOW FOR OVER 1500 HOURS.



# HISTORY

LEWIS HOWARD LATIMER  
IMPROVED THE BULB BY  
INVENTING A CARBON FILAMENT  
(PATENTED IN 1881); LATIMER  
WAS A MEMBER OF EDISON'S  
RESEARCH TEAM, WHICH WAS  
CALLED "EDISON'S PIONEERS."  
IN 1882, LATIMER DEVELOPED  
AND PATENTED A METHOD OF  
MANUFACTURING HIS CARBON  
FILAMENTS.



# HISTORY

IN 1903, WILLIS R. WHITNEY  
INVENTED A TREATMENT FOR THE  
FILAMENT SO THAT IT WOULDN'T  
DARKEN THE INSIDE OF THE  
BULB AS IT GLOWED.

IN 1910, WILLIAM DAVID  
COOLIDGE INVENTED A  
TUNGSTEN FILAMENT WHICH  
LASTED EVEN LONGER THAN THE  
OLDER FILAMENTS. THE  
INCANDESCENT BULB  
REVOLUTIONIZED THE WORLD.



# WHY WAS THE INVENTION

## NECESSARY?

SINCE THE DAWN OF HUMAN HISTORY, MOONLIGHT, CANDLES AND LANTERNS PROVIDED THE ONLY ILLUMINATION. DURING THE FIRST HALF OF THE 19TH CENTURY, GAS LIGHTING DEVELOPED AND FLOURISHED. UNFORTUNATELY, GAS PRODUCED A FLICKERING LIGHT THAT BURNED DOWN THEATERS AND HOMES WORLDWIDE. ELECTRIC ARC LIGHTING, INVENTED IN 1809, WAS MUCH SAFER BUT FAR TOO BRIGHT FOR USE IN A SMALL AREA. A SMALLER LIGHT WAS NEEDED, AND IN 1880 THOMAS EDISON PATENTED THE FIRST COMMERCIALY VIABLE INCANDESCENT LIGHT BULB.



# HOW DID THE INVENTION OF LIGHT BULBS CHANGE PEOPLE'S LIVES TODAY?

YOU CAN SEE WITHOUT A FIRE, OR BURNING CANDLES, OIL LAMPS AND LANTERNS, WHICH CAN BE DANGEROUS LEFT UNATTENDED. ALSO NO NEED TO WAIT FOR DAYLIGHT TO DO ALL THE WORK THAT WE WISH TO DO. WE CAN WORK INDOORS IN BAD WEATHER, EVEN ON SMALL DETAILED TASKS, AND HOMES CAN BE BUILT WITH SMALLER/FEWER WINDOWS TO CONSERVE ENERGY. WE CAN MAKE PLANS TO COMPLETE JOBS, AND THEY DON'T DEPEND ON DAYLIGHT HOURS, OR SUNNY WEATHER TO COMPLETE THEM, ESPECIALLY FINE DETAILED WORK THAT REQUIRES CLEAR SIGHT. PEOPLE CAN WORK ALL HOURS OF THE DAY AND NIGHT, KEEPING HOSPITAL, OR MEDICAL SERVICES, AND POLICE, OR SECURITY SERVICES AVAILABLE TO THOSE WHO NEED IT. ONE'S LIFE AND WORK IN GENERAL DON'T REVOLVE AROUND THE TIME OF DAY, AND WHAT THE WEATHER, OR SEASON MAY PROVIDE IN THE WAY OF ILLUMINATION.

IN THE TOP TIERS OF MANY PROFESSIONAL SPORTS, IT IS A REQUIREMENT FOR STADIUMS TO HAVE FLOODLIGHTS TO ALLOW GAMES TO BE SCHEDULED OUTSIDE DAYLIGHT HOURS. EVENING OR NIGHT MATCHES MAY SUIT SPECTATORS WHO HAVE WORK OR OTHER COMMITMENT EARLIER IN THE DAY. THE MAIN MOTIVATION FOR THIS IS TELEVISION MARKETING, ESPECIALLY IN SPORTS SUCH AS GRIDIRON WHICH RELY ON TV RIGHTS MONEY TO FINANCE THE SPORT. SOME SPORTS GROUNDS WHICH DO NOT HAVE PERMANENT FLOODLIGHTS INSTALLED MAY MAKE USE OF PORTABLE TEMPORARY ONES INSTEAD.

# RESOURCES

- [картинки](#)
- <http://elektrik.info/main/fakty/580-kto-na-samom-dele-iz-obrel-elektricheskuyu-lampochku.html>
- <http://www.masterplusremont.spb.ru/blog/izobretenie-elektricheskoy-lampochki/>
- [https://en.wikipedia.org/wiki/Electric\\_light](https://en.wikipedia.org/wiki/Electric_light)
- [первая лампочка](#)

*THE END.*