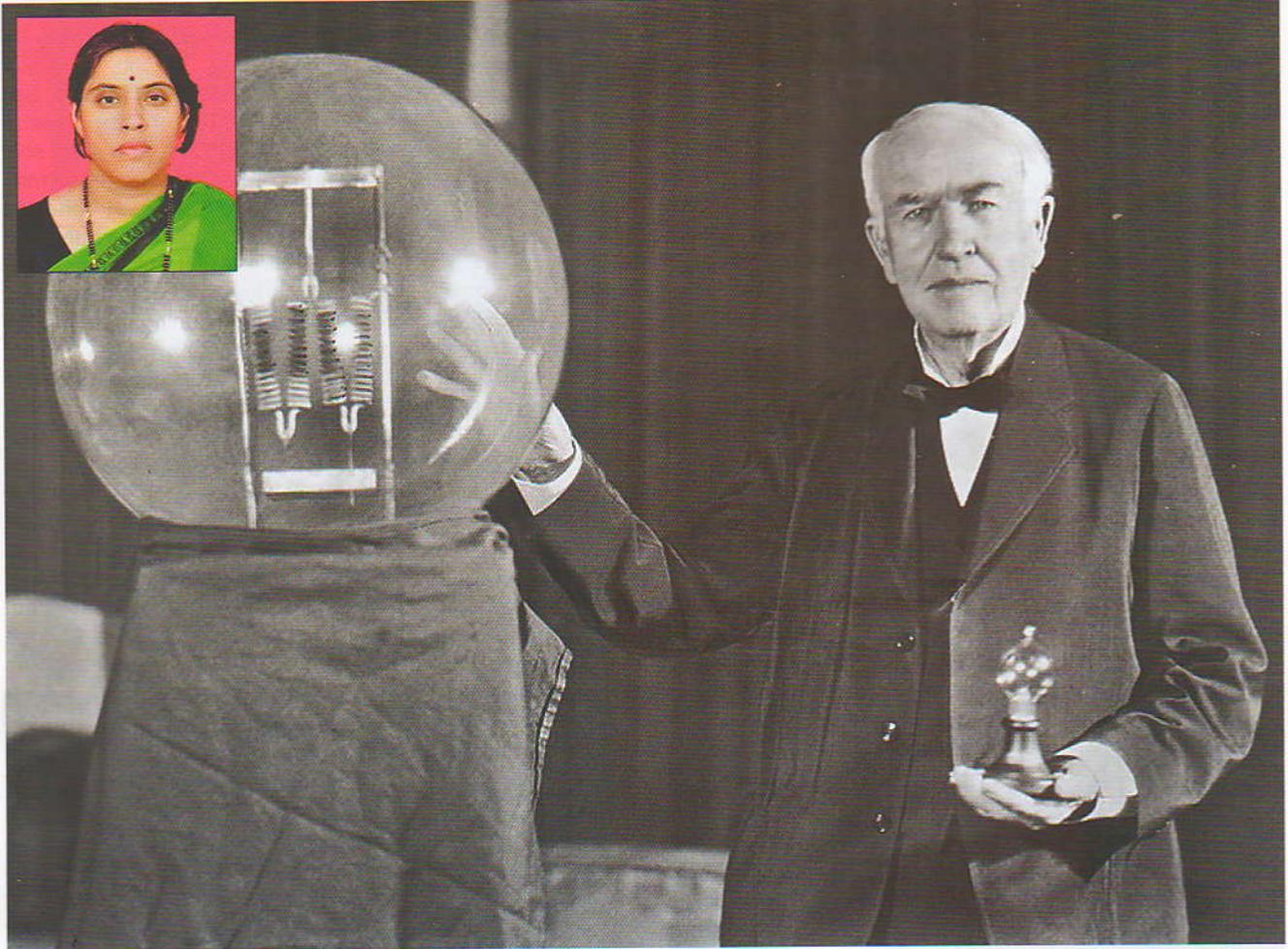


War and Peace

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Electrical and electronics products like bulbs, irons, mixers, radio, televisions, computers, cell phones and many others are integral part of our life. History tells us that even in ancient civilisations in Egypt and Greece there was awareness about electric fish, shocks and rays. Around 600 BC, the Ancient Greeks had discovered static electricity by rubbing fur on amber (fossilized tree resin). Electricity remained matter of intellectual curiosity till the beginning of seventeenth century. After that English scientist Gilbert, Benjamin Franklin, Galvani, Alessandro Volta and many others conducted extensive research in this field. The nineteenth century saw rapid progress with inventors like Edison and Alexander Graham Bell, making the field

research and Intellectual Property (IP) intensive. The trend still continues. Electronics, comparatively recent, can be traced back to invention of vacuum diode by J.A. Fleming, in 1897. In 1969 with the introduction of microprocessors by Intel a new era began. Electronics also has been research and IP intensive. Generation of IP in these two sectors has made them IP battlefield. The incidence of IP wars and peace in this industry is rarely found in other industries. Here is the glimpse at the same -

When we refer to electric bulbs, immediately **Thomas Edison's** name comes to our mind. This notable invention turned nights into days and is used world over for more than one fifty

years. However he was not the first to invent the bulb, many inventors had tried their hand on such invention. Prominent among them was English chemist Joseph Swan. In 1860 he had developed a light bulb using carbonized paper filaments. Swan received a patent in the United Kingdom in 1878, and in February 1879 he demonstrated a working lamp in a lecture in England. The vacuum pumps of his day were not efficient as they are now, and though his prototype worked well for a demonstration, it was impractical in actual use. Edison realized that the problem with Swan's design was the filament. A thin filament with high electrical resistance would make a lamp practical because it would require only a little current to make it glow. He

demonstrated his light bulb in December 1879. Swan incorporated the improvement into his light bulbs and founded an electrical lighting company in England. Edison sued for patent infringement, but Swan's patent was a strong claim, and the two inventors eventually joined hands and formed **Edison-Swan United**. This company became one of the 'worlds largest manufacturers of light bulbs!

While Edison was working with DC currents, his contemporary and another great inventor **George Westinghouse** was engaged in alternate current. The rivalry between the two is known as '**War of Currents**'. Edison had developed the first practical incandescent light bulb in 1879, supported by his own direct current electrical system. Following this, there was a huge demand to build hydroelectric plants to generate DC power in cities across the United States. This guaranteed a windfall of patent royalties to him. Edison knew limitations of DC in transferring power over distance. He employed Nikola Tesla, the engineering genius to redesign DC

generators. Edison ridiculed Tesla when he told Edison that future of electric distribution lied in alternating current. Tesla set up his own laboratory and sold some of his patents to George Westinghouse. Westinghouse Electric Company began installing its own AC generators around the country which alarmed Edison. Edison played many tricks to turn public opinion against Westinghouse by giving negative publicity to alternate currents and stop commercialisation of the latter's patents. Westinghouse vehemently fought back and in 1893 got contract for Chicago's World Fair. This contract gave him the much needed positive publicity. The **Edison vs Westinghouse** saga revolved around research, inventions, patents, commercialising patents, vested interests and dirty moves behind the scene. The saga is well captured in the '**Last Days of Night**' by Graham Moore. (A movie was also released in 2016.)

Marconi Wireless Telegraph Co. of America v. U.S. 1943 also known as the Great Radio Controversy, is a very

important case relating to Radio. Guglielmo Marconi is regarded as the "inventor of radio" though many others like Tesla, Clerk Maxwell had worked and achieved remarkable results in the field. He had patented his invention in America and formed a company to exploit the patents. Patents gave him recognition as inventor of Radio and were instruments for commercial success. The company was later sold to General Electric, which then formed the Radio Corporation of America (RCA). In 1916 Marconi's company filed a patent infringement suit against the United States for unpaid royalties based on a subsequent tuning patent. The case was going on for twenty five years! Marconi's company did not withdraw the charges even after all assets were sold to General Electric. The US Government argued that the subsequent patent was invalid as it was anticipated by prior art. The Court recognised Marconi's earlier patents as fundamental in wireless communication space but invalidated subsequent patents denying royalty for the same. One of the Judges, expressed his





dissent and questioned the entire purpose of the patent system if a genius like Marconi was denied royalties by judges who did not understand fully complex inventions. This is a burning and widely debated issue even now. Another important issue was unfolded in this case- how to balance interest of inventor who is a plaintiff in infringement suits and promote the defendant's innovations too. Patent litigation is very costly (especially in USA.) There is a fear that patent trolls can step in the picture and the damages claimed in infringement can go to unreasonable levels.

Philo Taylor Farnsworth the inventor of the first electronic television was an unfortunate man. In 1928, he demonstrated all-electronic television prototype—the first of its kind—made possible by a video camera tube or "image dissector. Radio Corporation of America (RCA) offered him to purchase patent rights on his device which he denied. This led to David vs Goliath fight. RCA dragged him into a

legal battle through interference proceedings at the US the Patent Office. The Corporation claimed that inventor Vladimir Zworykin who had joined RCA as an employee had predated Farnsworth patents filed in 1923. (Interference proceedings is an administrative process at USPTO to decide which applicant is not entitled to patent if two or more file patent for the same invention. Till recently they followed first to invent rule whereas most of the countries follow first to file rule). Ultimately USPTO ruled in Farnsworth's favour. After losing the proceedings, RCA licensed the patent from Farnsworth. In 1939 at a grand launch in New York World Fair, RCA claimed that it had invented the television! Against this back drop **Samsung and LG's** decision to end patent battle over digital televisions, Blu-ray players and mobile handsets and to cross licence each other's patents covering these electronic devices sounds like music to ears. In the year 2011 both agreed 'to focus more on cementing their leadership in

the global market by cooperation, instead of engaging in all-consuming patent disputes' The two firms had accused each other of stealing liquid-crystal display (LCD) and organic light-emitting diode (OLED) technology and key engineers.

In the latter half of twentieth century as the computers started getting increasingly used there were many battles in semiconductor industry. Notable among them was Fairchild Semiconductor vs Texas Instruments in 1950s. It centred on the inventorship of modern integrated circuit. Considering the complex nature of the product many countries (including India) passed a separate legislation relating to semiconductors, which helped in reducing the number of disputes.

As the popularity of electric and electronic gadgets increased, number of IP disputes increased too. These disputes resulted in suits, counter suits, payment of damages, mergers and acquisitions and even licensing of IP

from the opposite party. Few years back, Whirlpool Corp, and LG Electronics settled pending patent infringement lawsuits involving refrigerators. In the cell phone category in the last ten years there have been patent wars between Apple Incorporation, Samsung, Nokia, Google, and many others. In 2012 Apple started battle against Samsung for infringement of iPhone's design and utility patents for basic functions of a smart phone, like tap to zoom and the home screen app grid. Samsung countersued Apple for 3G patents, and filed claims in Germany, Japan, and South Korea. The Jury in USA case agreed that Samsung copied the black rectangle shape and rounded corners, the bezel, and a patent that covered the graphical layout of icons on the iPhone. The litigation continued over payment of 'total profits' as damages. Samsung was ordered to pay \$1bn to Apple. At the end of the trials and retrials finally both reached a settlement at \$548. The trial did not affect the cross-licensing agreements between the two. Samsung is main supplier of DRAM and NAND flash chips for iPhones. Apple has also

been battling with Qualcomm in the USA and China. Industry experts see another long battle between the two.

During last few years dominance of Chinese companies in the world electronic market has increased. IP infringement suits are being filed against **Huawei, ZTE** and others. **Battle lines are already drawn** between Chinese companies and American companies and companies in other countries too.

The electricity and electronic sector has seen a number of **trademark battles** too. One of such famous battle is Electric Shaver Battle. The battle is quite old but gives insight into the use of litigation as a business strategy, specifically retaining one's monopoly position and trying to eliminate competition. Philips Royal had a monopoly in the electric shaver with a design comprising three rotary cutting heads arranged in each corner of an equilateral triangle. Philips had in numerous countries obtained trademark protection for several different kinds of representations of the top part of the shaver, picture

trademarks as well as three-dimensional shape trademark. In early 1980s Izumi, a Japanese company started manufacturing and marketing triple-headed shavers in the United States and in other countries too. Philips reacted strongly and filed patent and trademark infringement suits. With this, started Electric Shaver Battle which lasted for twenty years, spread across many countries including Canada, France, Sweden, UK and USA. As per IP law of most of the countries trademarks must be distinct and non-descriptive of the products. Shape can be registered as a trademark but if the shape is a purely functional aspect, it cannot be registered as trademark. In many countries Philips's trademarks were found either purely functional in nature and or descriptive of the product. So Philips lost the cases, trademarks were invalidated. The Court in US remarked that Philips' motives and actions clearly constituted a malicious, fraudulent, deliberate and wilful behaviour, as Philips had forced other companies into spending large sums of money to defend themselves against Philips' unsupported claims. Philips'

