慶祝歷時 175 年的創新

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喬治·威斯汀豪斯 (George Westinghouse) 于 1846 年 10 月·6 日·出生於紐約中央橋小鎮。旅美科協匹兹堡分會 CASTP 在 2019 年全球創新峰會上隆重紀念了這位先驅發明家、進步實業家和創新企業家。

內戰光榮服役後,這位年輕的發明家回到了家鄉。1865 年,19 歲的他獲得了他的第一項發明專利,即旋轉式蒸汽機。兩年後,他設計了一種“替換器”來引導脫軌的鐵路車輛回到軌道上,並設計了一種“可逆的蛙式裝置”,一種在軌道之間切換列車的裝置。 1867 年, 他遇到了他的妻子瑪格麗特·厄斯金, 展開熱烈追求並于同年結婚,一直相伴 50 餘年。

他的發明中,徹底改變了鐵路行業是空氣制動系統,它最終爲工程師提供了一種快速、可靠和安全的方式來制動他們的火車。他接下來開發的自動信號和轉換系統進一步提高了鐵路的安全性和運行效率。

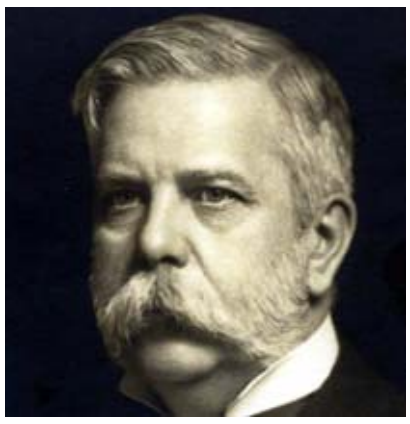
爲了尋求鐵路客戶以及製造這些產品的鋼材來源,他于 1868 年舉家來到匹兹堡並創辦了公司 - 西屋公司,這是他創業中的第一桶金。

三年後,威斯汀豪斯因西屋的繁榮足以爲瑪格麗特呈上一份特別的生日驚喜。

他在匹兹堡以東 6 英里、Murtland Street 和 Lang Avenue 之間的賓夕法尼亞鐵路幹線沿線的東自由谷秘密購買了一套房子和 5 英畝的地塊。位置很合適,因爲鐵路是西屋公司的主要客戶,這讓他可以輕鬆出行。瑪格麗特將莊園命名爲“孤獨”,儘管它建于路邊的位置,聽盡車來車往的繁華。

在接下來的十年里,隨着他的財富如雨後春笋般涌現, 威斯汀豪斯收購了相鄰的 5 英畝地塊,並將他的莊園一直擴展到托馬斯大道。房子被大大擴大了。他建造了一個新的馬棚,其地下室有一個私人實驗室車間。爲了連接他的房子和他的“內殿”,他請人挖了一條隧道,磚襯,八英尺高,隧道長超過 220 英尺。

在此生活和工作的 40 多年里, 許多著名的政治家、實業家和科學家都是常客, 包括威廉·麥金萊總統、英國開爾文勛爵和交流電理論家尼古拉·特斯拉, 以及著名的鄰居亨利·約翰·亨氏和亨利·克雷·弗里克二世。



這里最爲震撼的是 1884 年在威斯汀豪斯後院鑽的三口井中發現了大量天然氣。5 月 22 日清晨,鑽頭在 1600 英尺深處鑽穿了一個大氣穴,接踵而至的噴涌氣體在一周多的時間里不停地噴出。一周後,在威斯汀豪斯想出一個辦法來封井。當時,人們認爲天然氣對於住宅使用來説太危險了。在接下來的兩年中,他爲數十項用于天然氣安全分配、使用和計量的設備申請了專利。

他最初的客戶包括附近的許多其他豪宅。他的創新和洞察力對於天然氣成爲重要的新能源極爲關鍵。天然氣利用的快速發展既爲匹兹堡地區帶來了更清潔的天空, 又吸引了新的產業的蓬勃誕生。

西屋電氣將這些天然氣專利和租約轉讓給了費城公司, 這是他購買的一家不活躍的公用事業公司, 並用它來收購賓夕法尼亞州西部和西弗吉尼亞州的氣井。

到 1889 年,費城公司是美國最大的天然氣生産商。 Equitable Gas 和 Duquesne Light 均源自曾屬於費城公司的資産。

除了鐵路和天然氣之外,西屋電氣的創意天才除了鐵路和天然氣,還發明瞭許多領域。威斯汀豪斯與尼古拉·特斯拉合作開發了用于産生、傳輸和使用交流電的系統。

在西屋公司贏得 1893 年芝加哥世界博覽會的照明合同並利用尼亞加拉大瀑布的水力發電後,交流電在全球範圍內被採用。

總而言之,威斯汀豪斯以自己的名義獲得了 361 項專利, 平均每七周獲得一項專利,持續了 42 年。

威斯汀豪斯既是一位有遠見的企業家, 也是一位天才的發明家。他于 1869 年創立了西屋空氣制動公司,1881 年創立聯合開關和信號公司,1884 年創立費城公司,1886 年創立西屋電氣以及其他 50 多家公司,其中許多公司至今依然存在各個領域。

西屋電氣始終是一位進步思想家和人性化雇主, 是美國第一個實行 9 小時工作日,55 小時工作周和周六半日假期制的實業家。他是爲員工提供教育和文化機會的先驅; 並支付更高的工資來獲得更好的工人和工程師。西屋電氣是第一家雇傭女性工程師的公司。

喬治·威斯汀豪斯于 1914 年 3 月 12 日去世,享年 68 歲,當時他仍在發明。三個月後瑪格麗特去世時, 他們唯一的孩子喬治三世繼承了一切。

當時這位 29 歲的威斯汀豪斯並不住在匹兹堡,對“孤獨”西屋也沒有多少感情。四年後, 他將這處資産賣給了西賓夕法尼亞工程師協會, 後者于 1918 年 11 月 30 日將其轉讓給該市,修建成公園來紀念威斯汀豪斯。

根據轉讓契約條例, 這所豪宅在次年夏天被完全拆毀夷爲平地,“獨孤” 就變成了今日的西屋公園。迄今已經 100 多年,一成不變。

2018 年,西屋公園二世紀聯盟成立,以幫助爲後代打磨和保存這顆罕見的休閑聖地, 同時也改善其生態環境, 並記住以它命名的杰出人物。

西屋公園二世紀聯盟與 Point Breeze North 開發公司合作,發起了多方面的努力。

一個要素是爲城市制定一個全面的總體規劃, 遵循該規劃, 並旨在慶祝公園的資産以及更好地服務于其所在的社區。

另一個要素是西屋公園最近獲得的國家歷史名勝登記資格認證。正如我們所説,“歷史在這里發生”。我們也在尋求多方面的認可,可以將該公園進一步發展成有資格的植物園。這項努力是隨着最近《電流戰爭》電影的全球首映而開始的。

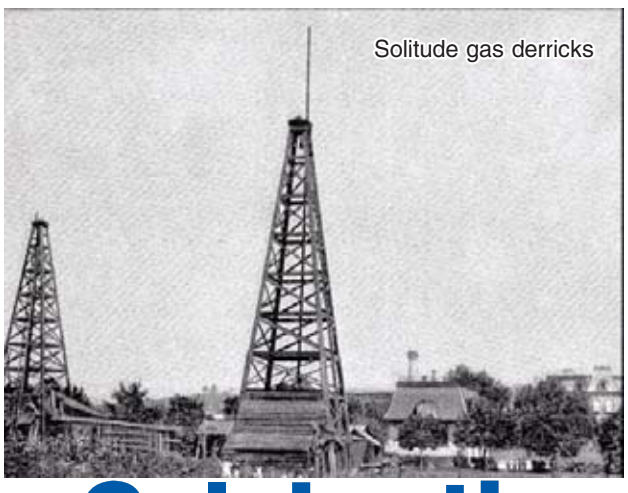
一部音樂劇, 講述了西屋和愛迪生爲開發電力而進行的史詩般的交流電 / 直流電之戰,由量子劇院在西屋公園搭建的大帳篷下上演。

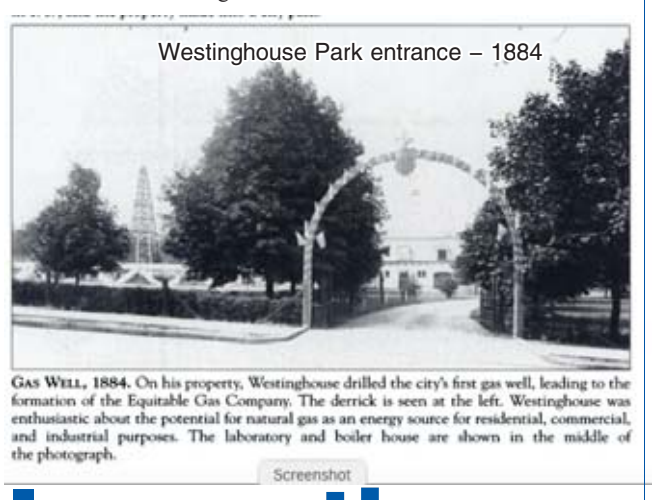
《電流戰爭》是今年 10 月 6 日喬治·威斯汀豪斯誕辰 175 周年紀念活動中的第一場活動。

我們稱之爲**威斯汀豪斯 175**。

從今年 10 月開始並持續到 2022 年秋季, 將會有更多紀念活動。

要瞭解有關公園和即將舉辦的活動的更多信息, 請訪問我們的網站 www.westinghousepark.org。





Celebrating 175 Years of Innovation

by David Bear Initial Organizer Westinghouse Park Second Century Coalition

George Westinghouse, the pioneering inventor, progressive industrialist, and innovative entrepreneur who was celebrated at the 2019 CAST P Summit, was born on October 6, 1846 in the small town of Central Bridge, New York.

After serving honorably in the Civil War, the young inventor returned home.In 1865, at age 19, he patented his first invention, a rotary steam engine. Two years later, he designed a "replacer" to guide derailed railroad cars back onto the tracks and a reversible “frog,” a device to switch trains between tracks. 1867 was also the same year he met, wooed, and wed Marguerite Erskine, who was his wife until death did them part nearly five decades later.

But the Westinghouse invention that revolutionized the railroad industry was the air brake system, which finally gave engineers a quick, reliable, and safe way to stop their trains. Automatic signaling and switching systems that Westinghouse soon developed further improved railroad safety and efficiency.

Seeking railroad customers to buy his products and a source of steel to build them, he moved to Pittsburgh in 1868 and started the company that would generate his first fortune.

Three years later, Westinghouse was prosperous enough to geta birthday surprise for Marguerite.

He secretly purchased a house and 5-acre parcel in the then still rural East Liberty Valley along the Pennsylvania Railroad’s mainline, 6 miles east of Pittsburgh, between Murtland Street and Lang Avenue. The location was appropriate, because the railroad was Westinghouse’s primary customer, and it gave him an easy way to get around.It was Marguerite who named the estate Solitude, its trackside location notwithstanding.

Over the next decade, as his fortune mushroomed, Westinghouse acquired the adjacent 5-acre parcel and expanded his estate all the way to Thomas Boulevard. The house was greatly enlarged. Westinghouse had a new stable built, with a private workshop in its basement. To connect his house and his "inner sanctum," he had a tunnel dug. Brick-lined and eight feet high, the tunnel is over 220 feet long.

During the four decades Westinghouse lived and worked at Solitude, numerous notable politicians, industrialists, and scientists were regular visitors, including President William McKinley, Britain’s Lord Kelvin, and Nicola Tesla, the AC electricity theorist, as well as notable neighbors like H. J. Heinz, and H. C. Frick.

But the most spectacular event that occurred at Solitude was the discovery in 1884 of a large supply of natural gas in three wells Westinghouse had drilled in his own backyard.

Early in the morning of May 22, the drill bit pierced a large pocket of gas at a depth of 1600 feet. The ensuing gusher spewed gas unchecked for over a week before Westinghouse devised a method to cap the well.

At that time, natural gas was considered too dangerous for residential use. Over the next two years, Westinghouse patented dozens of devices for the safe distribution, use, and metering of natural gas.

His initial customers included many of the other mansions in the neighborhood.Westinghouse’s innovations and insights were instrumental in making natural gas an important new source of energy. Its rapid development both resulted cleaner skies over the Pittsburgh area and attracted new industries.

Westinghouse assigned these natural gas patents and leases to the Philadelphia Company, an inactive utility he bought, and used it to acquire gas wells throughout western Pennsylvania and West Virginia.

By 1889, the Philadelphia Company was the nation’s largest natural gas producer. Both Equitable Gas and Duquesne Light derived from assets that were once part of the Philadelphia Company.

Westinghouse’s creative genius found many outlets in addition to railroads and natural gas. Working with Nicola Tesla, Westinghouse Electric developed systems for generating, transporting, and using alternating current.

After the company won contracts to light the 1893 Chicago World's Fair and harness the power of Niagara Falls to generate electricity, AC current was adopted worldwide.

All told, Westinghouse was granted 361 patents in his own name, an average of one every seven weeks for 42 years.

Westinghouse was as much a visionary entrepreneur as a gifted inventor. He founded the Westinghouse Air Brake Company in 1869, Union Switch and Signal in 1881, the Philadelphia Company in 1884, Westinghouse Electric in 1886, and more than 50 other companies, many of which still survive.

Always a progressive thinker and humanistic employer, Westinghouse was the nation’s first industrialist to implement nine-hour workdays, 55-hour workweeks, and half-holidays on Saturdays. He was a pioneer in providing educational and cultural opportunities for his employees; and paid higher wages to get better workmen and engineers. Westinghouse Electricwas the first company to hire a female engineer.

George Westinghouse was still inventing when he died on March 12, 1914, at age 68. When Marguerite died three months later, their only child, George III, inherited everything.

Age 29, this Westinghouse did not live in Pittsburgh nor had much affection for Solitude. Four years later, he sold the property to the Western Pennsylvania Engineers Society, who deeded it to the city on November 30, 1918, for use as a public park and memorial to Westinghouse.

In accordance with the deed transfer, the mansion was razed the following summer, and Solitude became Westinghouse Park.

That is how it has been for more than 100 years.

In 2018, the **Westinghouse Park 2nd Century Coalitionwas** organized to help polish and preserve this rare recreational gem for future generations, while also enhancing its ecology, and remembering the remarkable man after whom it is named.

In conjunction with the Point Breeze North Development Corporation, the WP2CC has initiated a multi-faceted effort.

One element is the creation of a comprehensive master plan for the city to follow going forward, a plan that celebrates the park's assets and is expressive of the communities it serves.

Another element is Westinghouse Park's recent certification of eligibility for listing in the national registry of historic places. As we say, **"History Happens Here."**

We're also seeking recognition for the park as a certified Arboretum.

Another element of the effortwas initiated with the recent world premiere of **The Current War.**

A musical play that tells the story of the epic AC/DC battle between Westinghouse and Edison to develop electricity, it was staged by Quantum Theatre under a big tent raised in Westinghouse Park.

The Current War was the first event in a year-long recognition of the 175th anniversary of the birth of George Westinghouse this October 6. We call it **Westinghouse175.**

Much more will be coming starting this October and running through the Fall of 2022.

To find out more about the park and coming events, visit our website www.westinghousepark.org.