

Birth of the Modern World

Also known as the Second Industrial
Revolution 1870-1914

London Science Museum

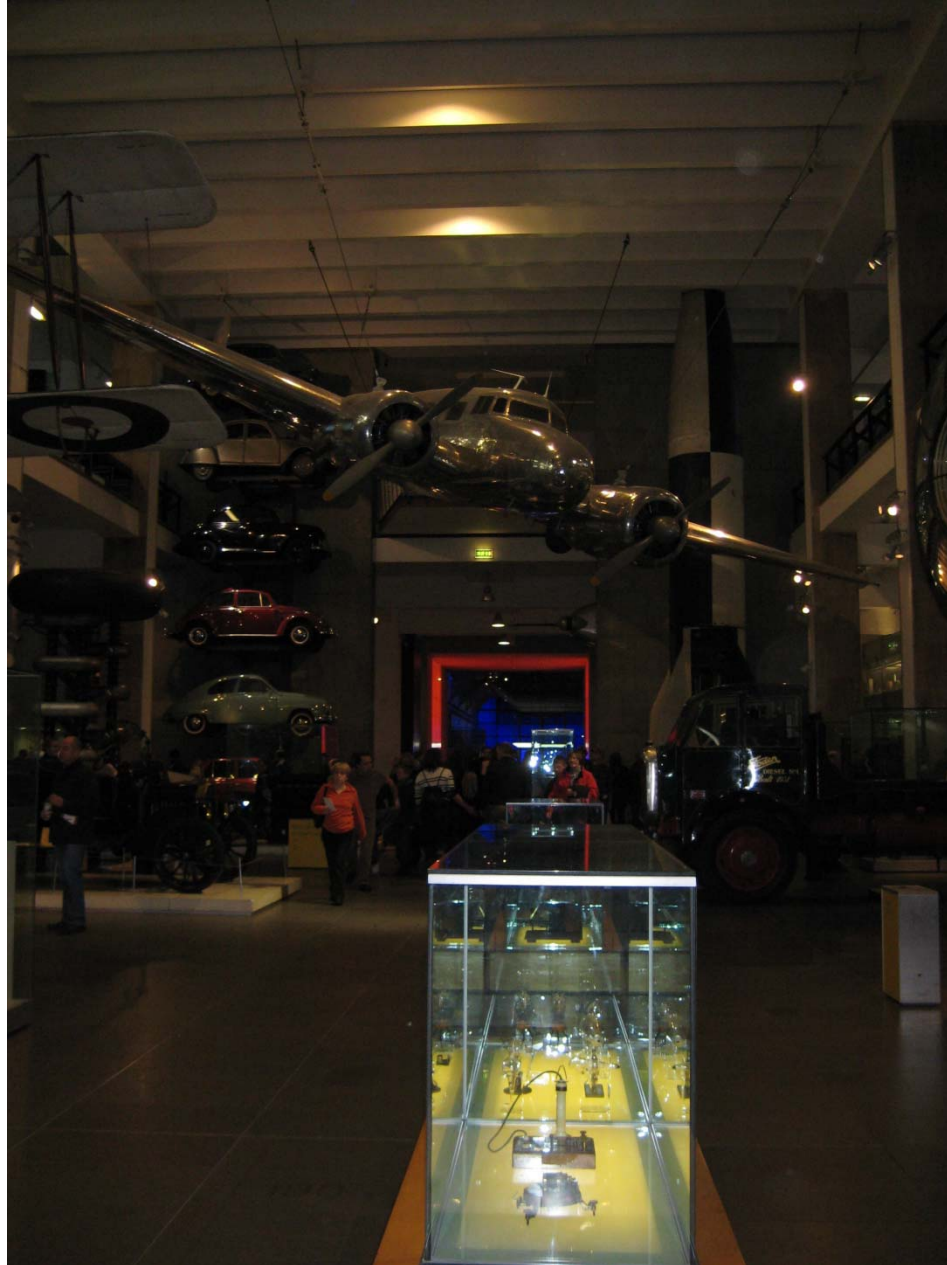


Image courtesy of [Michael Caroe Andersen](#) on Flickr.

“The Birth of the Modern World” (Christian, Chap. 13)

- “Revolution” becomes “normal”
- Tighter connections between knowledge and power (science and medicine)
- Interactive layers of systems (communication, transportation, production, distribution, financial)
- Globalization of systems: “the age of empire” (Eric Hobsbawm)

Train #25, The Powhatan Arrow
Norfolk and Western Railway
Salem, Virginia July 11, 1953

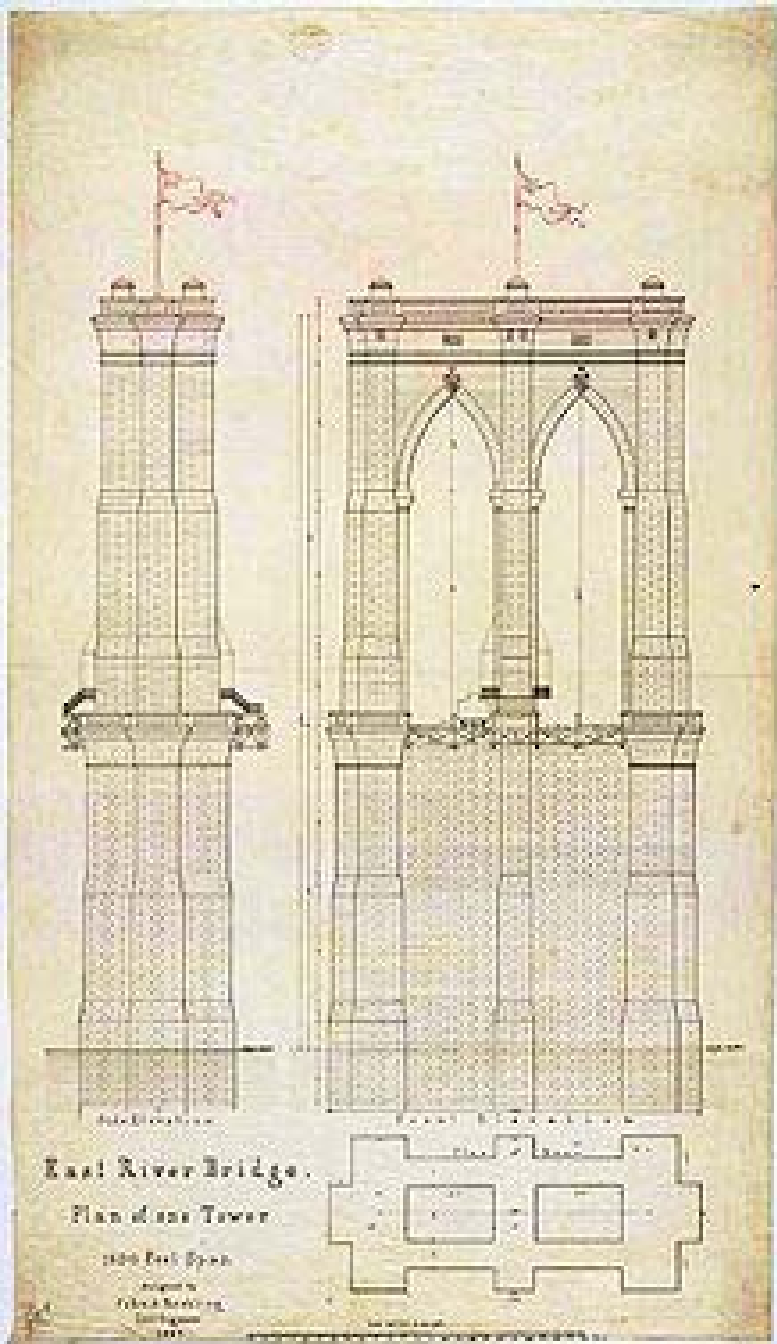
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See: <http://upload.wikimedia.org/wikipedia/en/a/ae/OP-13841.jpg>

The Brooklyn Bridge



Image courtesy of [Sarah Ackerman](#) on Flickr.



Plan for one of the towers of the Brooklyn Bridge, 1867



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Grain Elevator

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See: <http://bit.ly/iDD3WQ>

Oldest existing grain elevator in western Canada
Fleming, Saskatchewan 1895

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See: http://esask.uregina.ca/entry/grain_elevators.html

Cheadle, Alberta, Canada on Transcanada Highway

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See: http://www.cheadlealberta.com/images/Grain_Elevator.jpg

From Bijker, Hughes, Law, *The Social Construction of Technological Systems*



Image courtesy of [Flowizm](#) on Flickr.

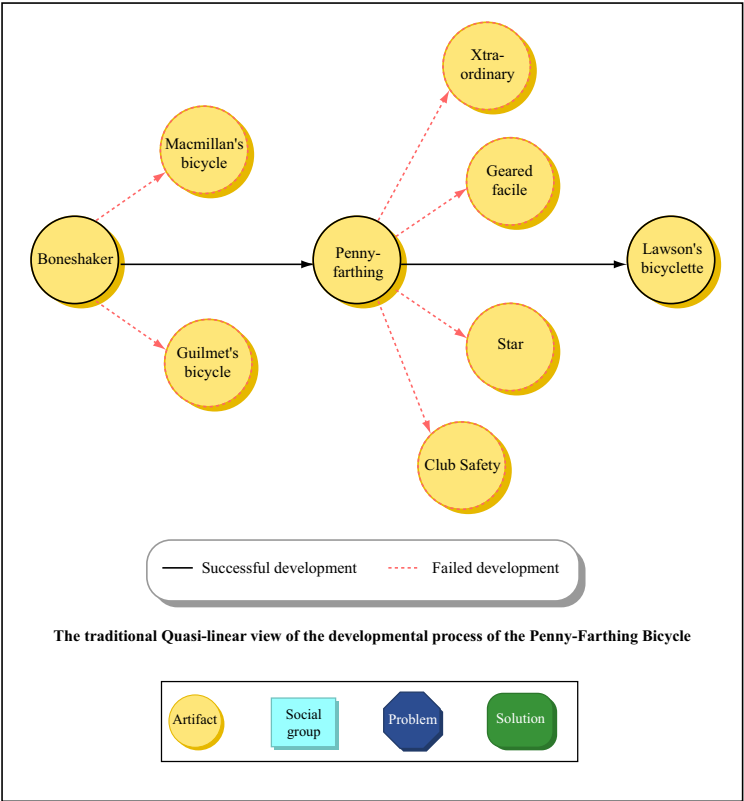


Image by MIT OpenCourseWare. After Pinch and Bijker, 1984.

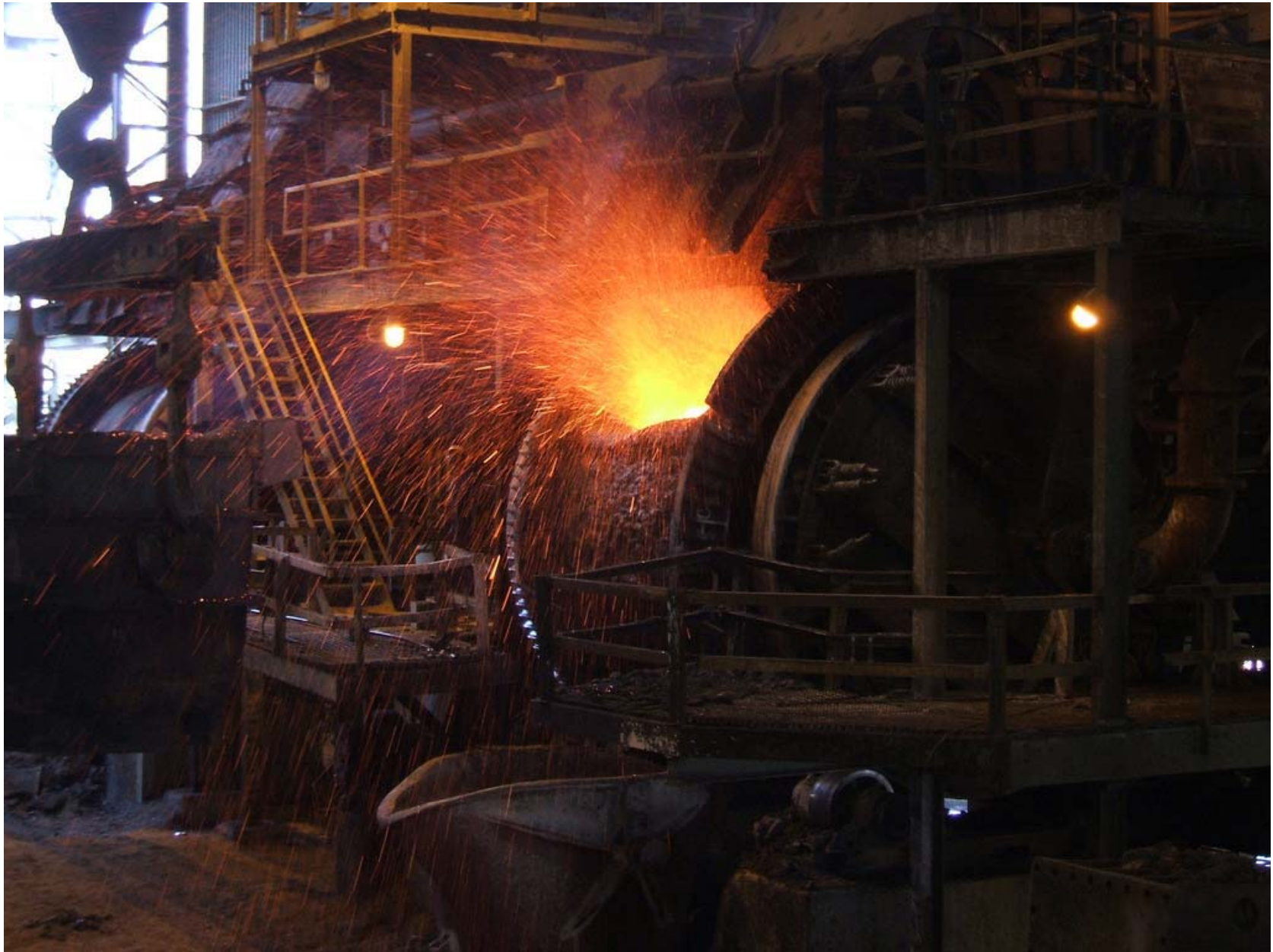


Image courtesy of [BBCworldservice](#) on Flickr.

Appalachian Train Tracks

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See: <http://www.wju.edu/ai/profile/steeliron.asp>

Carnegie Steel Furnace

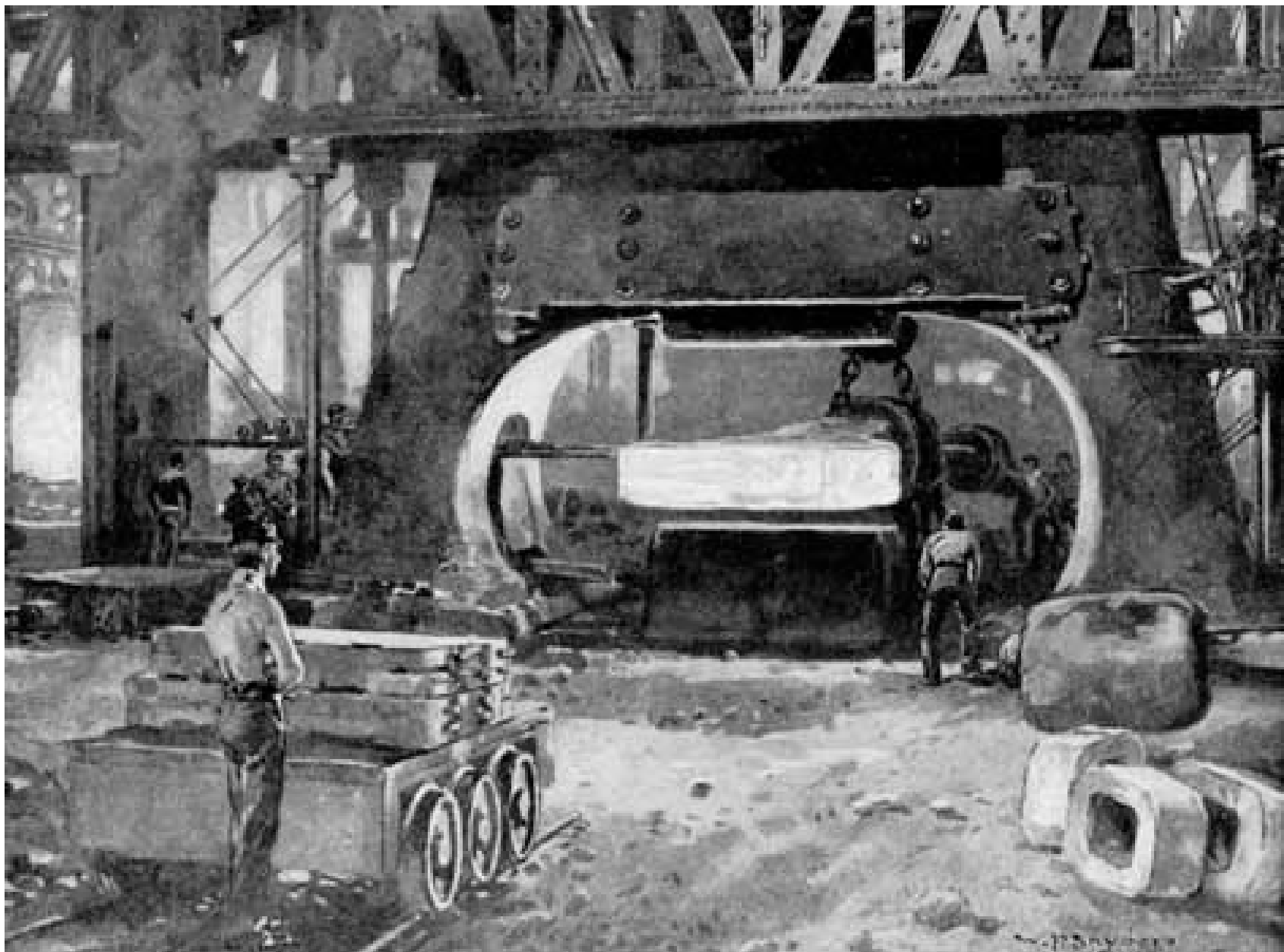
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See: http://www.census.gov/history/img/Carnegie_Steel_furnace.jpg

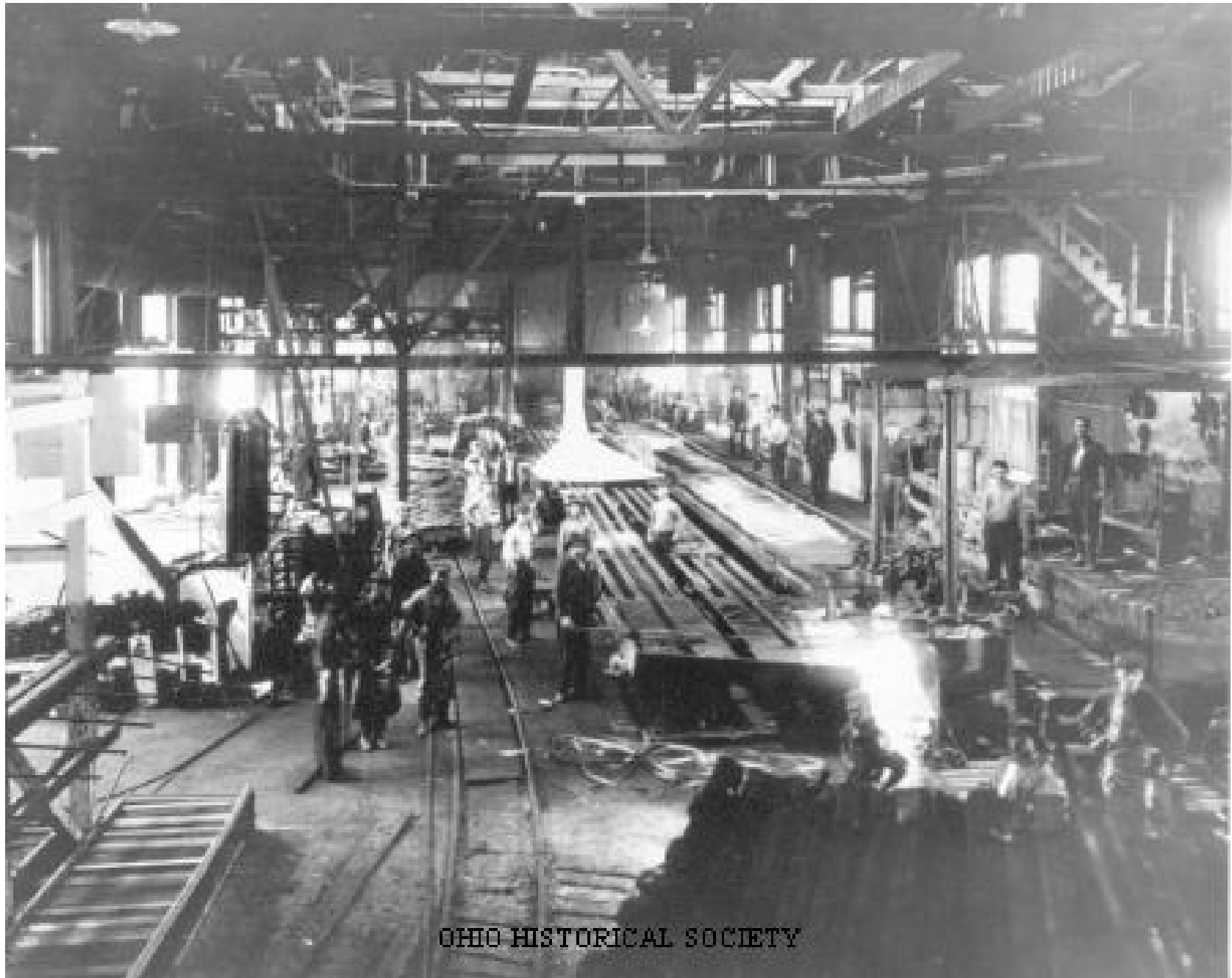
South Works, Carnegie Steel Company

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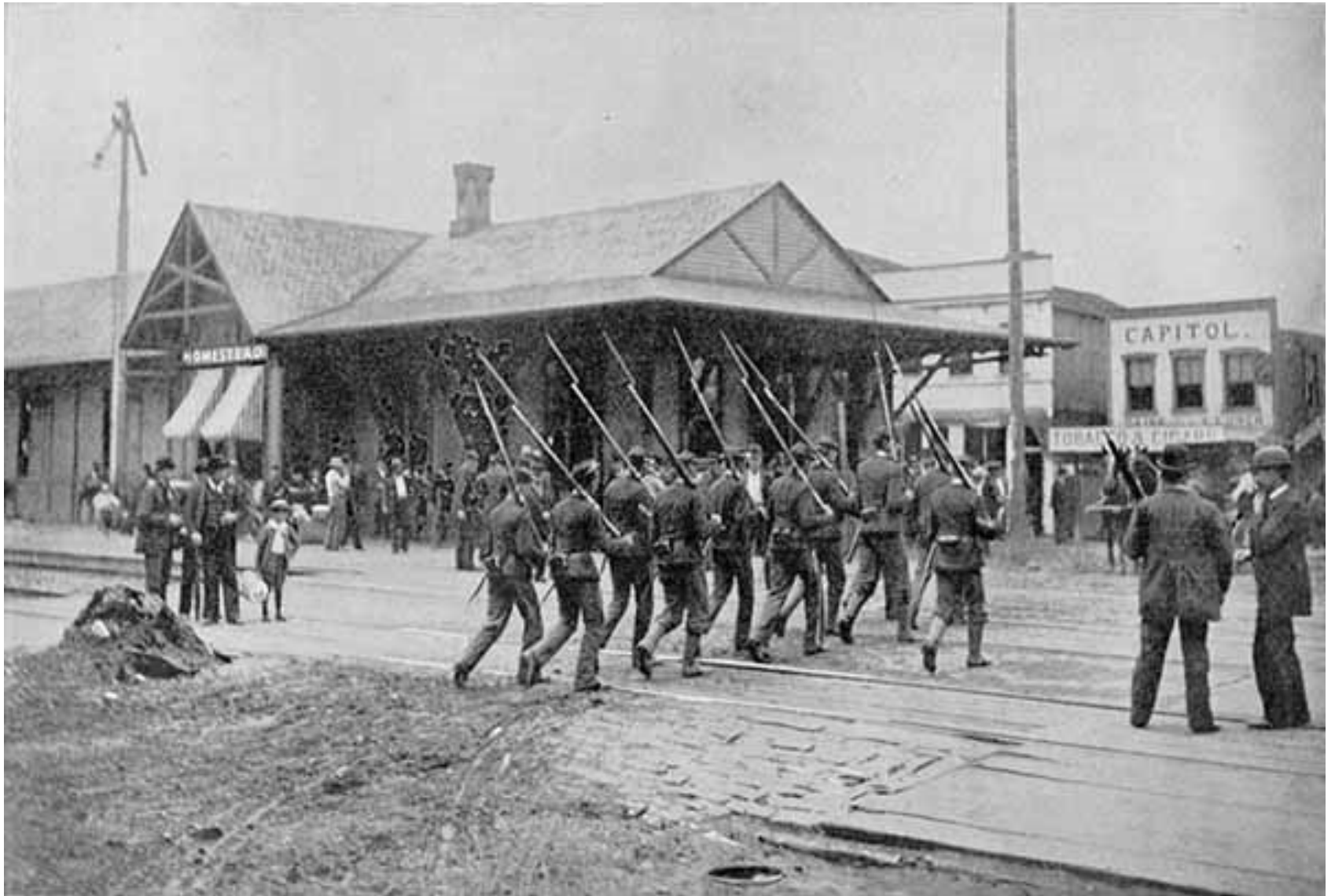
See: <http://explorepahistory.com/displayimage.php?imgId=1-2-BF5>



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Abandoned Mills

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See: <http://bit.ly/jy78yx>

1913 Model T Ford



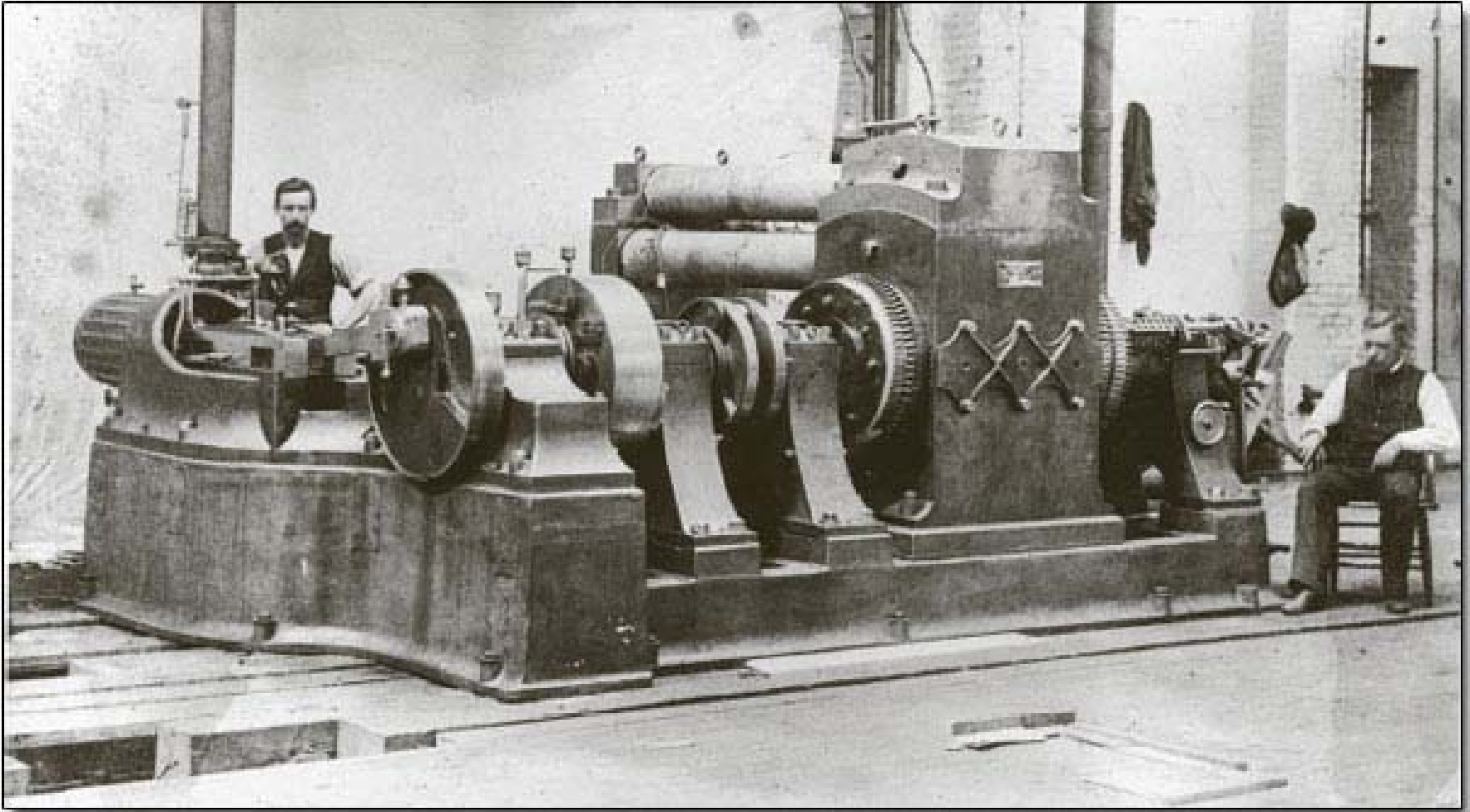
Image courtesy of [Greg Moine](#) on Flickr.

Global Oil Consumption

- 1890 10 million tons
- 1920 95 million tons
- 1940 294 million tons
- Doubled every decade thereafter:
- 1970s 2.5 billion tons

- In 1900, 4% of world's energy
- In 1970s, 50% of world's energy

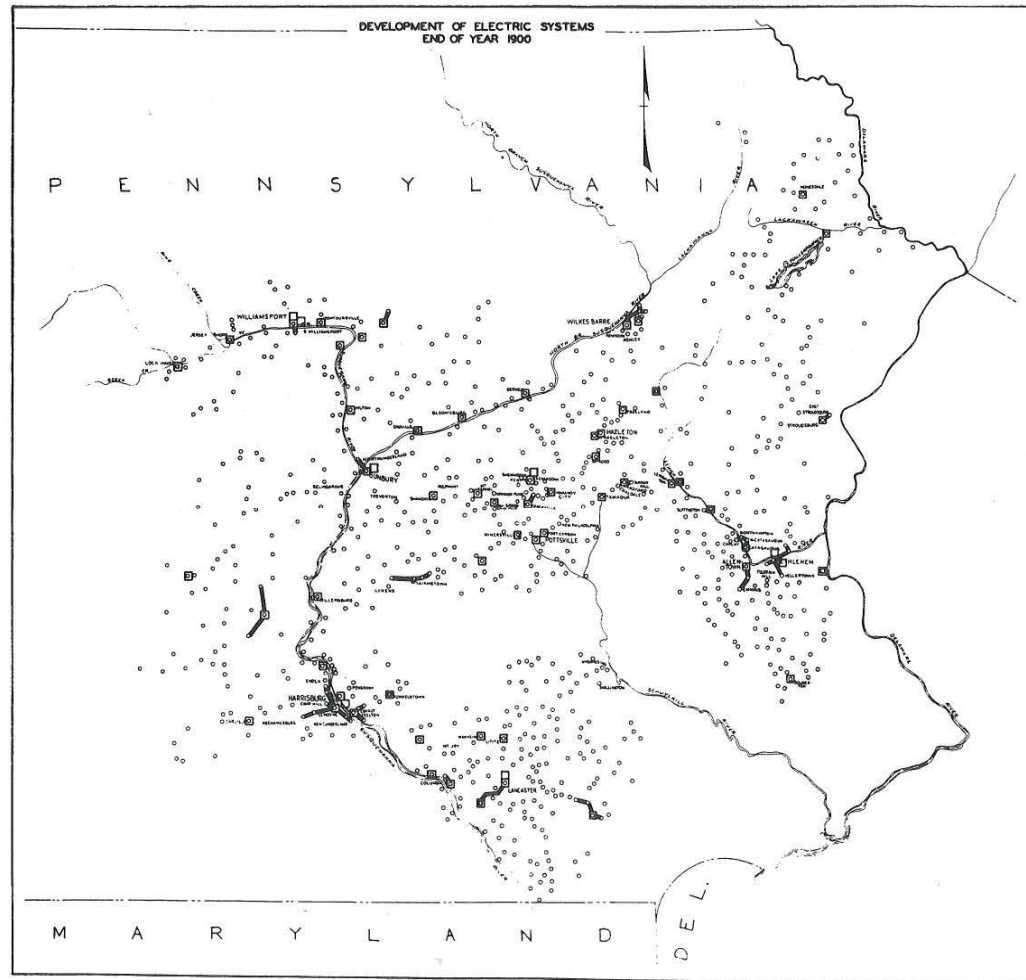
Edison's prototype dynamo



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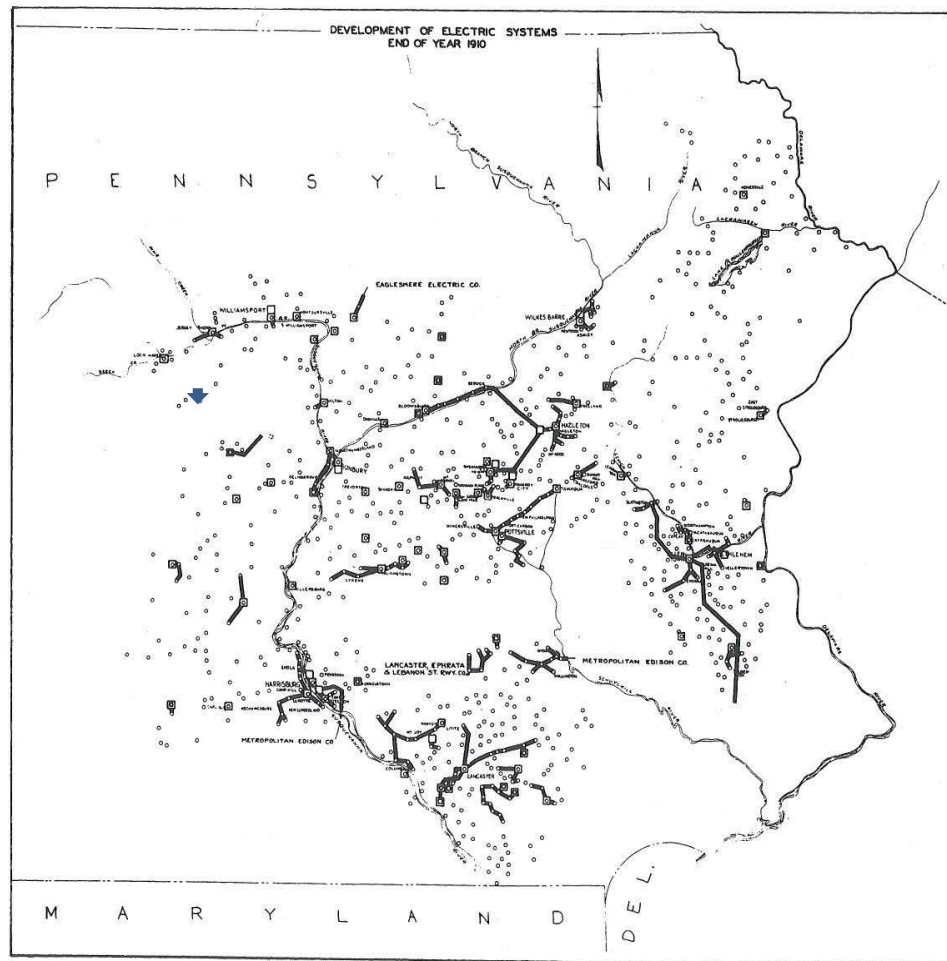
From Thomas P. Hughes, *Networks of Power* Electric light and power systems in Pennsylvania 1900

FIGURE 1.A. GROWTH OF AN ELECTRIC LIGHT AND POWER SYSTEM IN PENNSYLVANIA. FROM PP&L HISTORY, 1: xx.



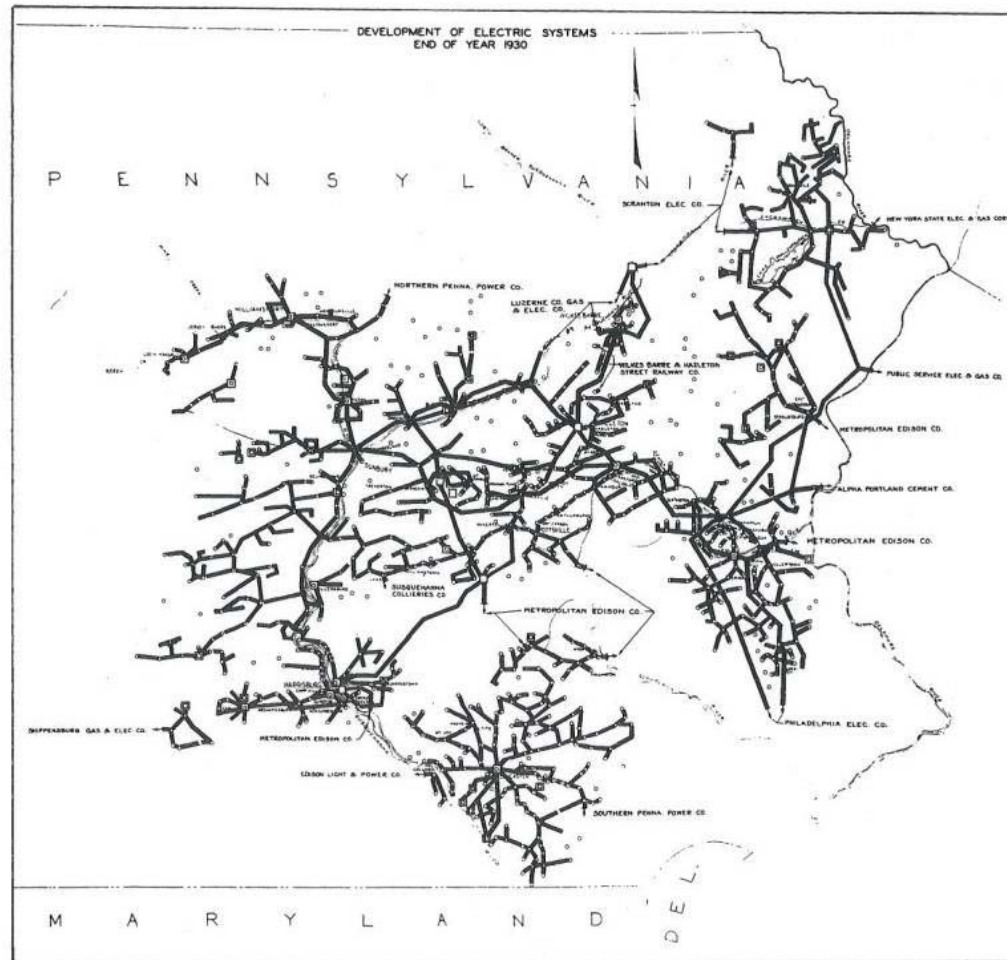
Transmission systems served by Pennsylvania Power & Light, 1900

From Thomas P. Hughes, *Networks of Power*
Electric light and power systems in Pennsylvania 1910



Transmission systems served by Pennsylvania Power & Light, 1910

From Thomas P. Hughes, *Networks of Power*
Electric light and power systems in Pennsylvania 1930



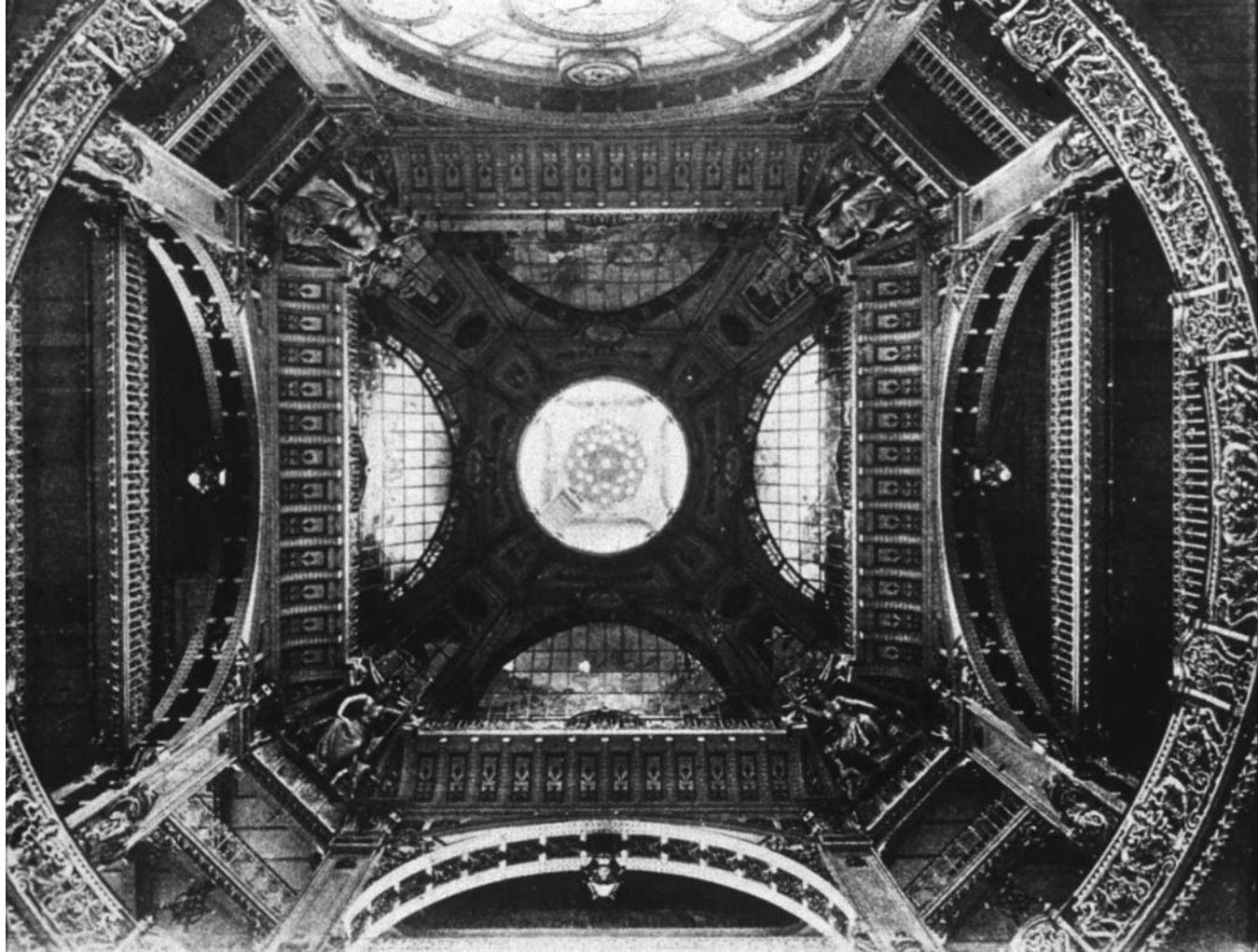
Transmission systems served by Pennsylvania Power & Light, 1930

Dufayel's credit establishment



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Interior dome, Dufayel's credit establishment
Rue de Clignancourt, Paris, 1902



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Wigmaking, as illustrated in Diderot's *Encyclopédie*
Collection of Virginia Historical Society



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Silkworm cultivation

From Diderot's *Encyclopédie*

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STS.007 Technology in History
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