

Beyond the protective tariff, Germany adopted a thorough *dirigism*. Industries were cartelized for greater productivity, as in the pooling of laboratory facilities. Large banks, interlocking with the state-sponsored cartels, were set into motion for the financing of national and international development programs. The government intensified its sponsorship of education, and constructed a vast network of railroads, canals, and ports; subsidized merchant ships; and built a world-class navy.

Other aspects of the great shift in German affairs under Bismarck—the pro-labor social welfare laws, the German-U.S. partnership for German and worldwide electrification, the turnabout in relation to the Catholic Church—would have tremendous worldwide consequences. We must look further, behind the scenes in America, and into the realms of labor radicalism and Catholic Church politics, to understand these developments.

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## The Centennial: renewed American Revolution

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Carey and his allies spurred their worldwide organizing by obtaining Congressional sponsorship for a great celebration of the 100th anniversary of America's Declaration of Independence. The 1876 Centennial Exposition in Philadelphia, the capital city of the 1776 Revolution, called forth displays of the industrial progress of the United States, the Germans, and all the world's nations.

The huge exposition buildings in Fairmont Park were erected by the Philadelphia Interests industrialists such as William Sellers, who was a leader of the Franklin Institute, along with Baldwin boss Mathew Baird. The Carey forces managing the exposition were led by Henry Carey's political

### Emil Rathenau's part in the 'land-bridge'

*Emil Rathenau (1838-1915) was the founder of the German Edison Company (later known as Allgemeine Elektrizitäts Gesellschaft, AEG), which electrified Germany's cities and industries. The following are extracts from a report by Frank Hahn.*

Emil Rathenau and Thomas Edison were direct business partners, and became dear friends. They often visited each other, and learned new things from each other.

Rathenau thought of machines as the "tools for the future," and the realization of his plans resulted in the most rapid economic boom in history: In less than 25 years, there were 7 million new jobs created, as the immediate result of the "replacement of physical labor by machines."

AEG functioned as a kind of private NASA. New branches of production, machine types, and affiliated spin-off enterprises were continually being founded, which all aimed at one goal: the electrification of the world economy. To this aim, Rathenau gathered together the best economists, engineers, and construction contractors of this time under the roof of the AEG. . . . Thus even before production, there was research into and development of new technologies.

Rathenau concentrated on electrification of transport, electrification of the chemical industry, and the building of large power stations and "full coverage" electrical networks.

His goal was nothing less than the electrification of the

world economy. So, he expanded AEG in the 1890s to become a worldwide enterprise, with affiliates in 18 countries: Austria, Switzerland, Italy, France, Belgium, Great Britain, Spain, Romania, Bulgaria, Russia, Denmark, Norway, Sweden, South Africa, Mexico, Brazil, Chile, and Argentina. Among other projects, AEG built the great electrical grids in Seville, Bilbao, and Madrid, Spain; as well as Warsaw, Poland; Genoa, Italy; and Buenos Aires, Argentina—and later in Russia.

After the successful introduction of electrical streetcars in Halle, Germany, in 1892, the city of Kiev, Ukraine gave AEG the task of constructing the grid for electric streetcars and to deliver 66 trolley cars to operate on it. Rathenau went to Russia himself, and soon there were tramways built in Moscow, Lodz, and Astrakhan. Not long after followed the electrification of St. Petersburg.

The word got around: "Berlin is the capital of the Russian electrical industry."

[At the same time, Frank Sprague, a partner of Thomas Edison and the Philadelphia Interests, introduced electric streetcars and subway trains to the United States—ed.]

In 1904, AEG began to work in China, though preceded there by Siemens, which had already built some streetcars and electrical generators there. Starting in 1912, AEG got the job of electrifying the Trans-Siberian Railroad.

The electricity generating plant at Niagara Falls, New York [with engineering directed by Coleman Sellers of Philadelphia's William Sellers machine works—ed.] was financed in part by Deutsche Bank. When Edison Electric Light was formed in the United States in 1889, the majority of shares was held by four German enterprises: AEG, Siemens and Halske, Bankhaus Stern, and Deutsche Bank.