OUR CIVILIZATION.

Our industrial age is the result of two events in the world's history: the declaration of the rights of man by the great French Revolution, and the invention of the steam engine.

The former established the underlying principles: personal liberty and equality of opportunity. But these became possible only by the invention of the steam engine. It was the engine which freed man from the slavery of continuous manual labor to produce the bare necessities of life.

Thus man graduated from the machine doing the work of the world, to the machine tender directing the work of the engine.

Before this, education was rather a disadvantage by making the masses dissatisfied with their lot. The greater knowledge and higher intelligence required by the machine tender, made some education necessary, and systems of education of the masses had to be developed all over the world.

Thus indirectly, the steam engine also freed man from the slavery of ignorance and superstition.

Then followed the great industrial development led by steam engine and steamship, locomotive and finally electric power.

With the former limited means of transportation, in all his necessities of life man depended on his immediate surroundings.

A few inches more of rain meant crop failure and possibly starvation. No great civilization was possible under such conditions.

The development of railroads and transportation systems made man independent of his surroundings by making available for his necessities of life everything produced anywhere in the world, and so secured his safety against famine and starvation.

But besides materials, the second essential of civilization is energy, or power, that is, the thing which pushes and moves, which lights and heats, which turns the wheels of industry and shapes the materials for the use of man.

Our present generation sees the development of the transmission, distribution and supply of the world's energy requirements, by the electrical engineer, in the transmission lines,
which rapidly cover the country with a network similar to that
of the railways: the one taking care of the distribution and supply
of energy, the other of materials.

With these, all requirements are complete to develop the most perfect civilization the world has ever seen, a civilization not for a minority depending on the labor of masses of slaves or serfs, but a real civilization, of benefit to all the members of the human race.

CHARLES P. STEINMETZ.

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