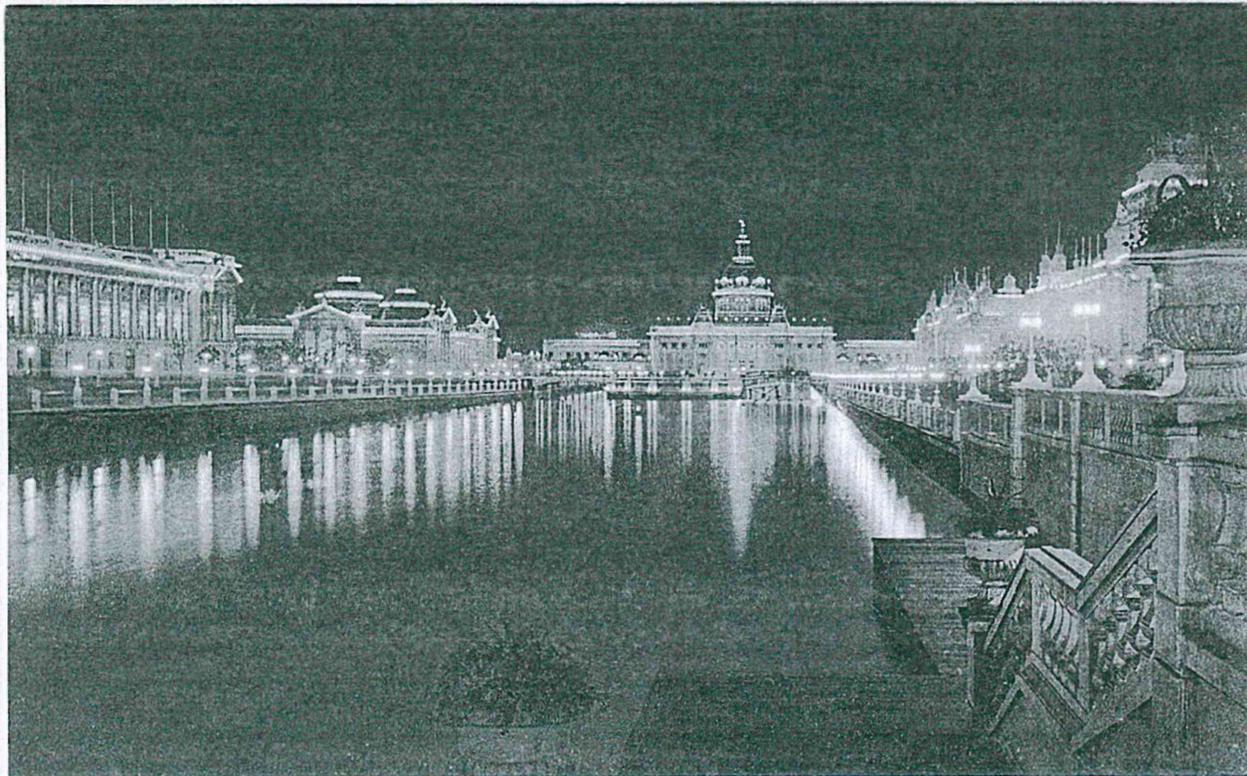




TECHNOLOGICAL INNOVATIONS

ATTENDANCE QUESTION

What technology do you see in this picture that might have been exciting or new to people in 1898?



ADVERTISEMENTS FROM THE 1890S

What do these advertisements from the 1890s have in common?

DRINK

Coca-Cola

TRADE MARK

Delicious



Refreshing

Cures Headache.
Relieves Exhaustion.

AT SODA FOUNTAINS 5¢

WARNER'S

SAFE NERVINE

GIVES REST & SLEEP.
CURES HEADACHE & NEURALGIA.
VERTIGO OR DIZZINESS IS A
POSITIVE REMEDY
FOR NERVOUS PROSTRATION
CAUSED BY EXCESSIVE
PAINS, DRINKING,
MENTAL SHOCKS,
OVERWORK,
ETC.



WARNER'S SAFE PILLS HAVE NO EQUAL.

1 Mile in 23 MINUTES 23 SECONDS by JOHN KEE

COLUMBIA BICYCLE

383 Miles in 25 CONSECUTIVE HOURS by JOHN KEE

1404 MILES in 6 DAYS - BY - C. WALLER

205 MILES in 22 Hours TURNPIKE ROAD by LAUREN AND E. SMITH

212 MILES in 22 Hours on the ROAD by BATH and others

10 MILES in 14 MINUTES by JOHN KEE

AN EVER SADDLED HORSE WHICH EATS NOTHING

1/4 MILE in 35 1/2 SEC. Chestnut St. Phila. Pa. 1876

597 WASHINGTON ST.

SEND 3 CENTS STAMP FOR CATALOGUE & PRICE LIST CONTAINING

THE POPE MFG. CO.

BOSTON MASS.

ADVERTISING NEW TECHNOLOGY!

Part of the purpose of the Trans-Mississippi Exposition was to show off new technology, especially technology that had been created in western states.

GOAL: an advertisement for one of the new technologies being showcased at the Trans-Miss!

STEP ONE: Read the source about your technology

STEP TWO: Create an advertisement for your technology.

Convince people it's **AMAZING**, and they should come check it out at the Trans-Mississippi Exposition!

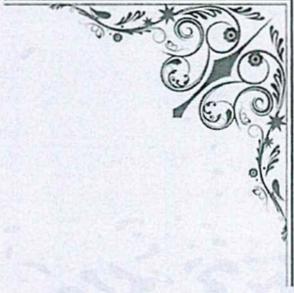
Your advertisement should include:

- The name of the technology
- What problems will this technology solve for people?
- How will this make a positive impact on peoples' daily lives?

Hang your advertisement poster up somewhere on the wall when it's done!



45:00



TECHNOLOGY SCAVENGER HUNT

GOAL: Make connections between new technologies that were showcased at the Trans-Miss!

Your **CHALLENGE** is to find new technology that fits in each category on your notes. You can only use each technology **ONCE!**
No repeats!

- **MOVEMENT:** Move at your own pace. Try not to clump up around pictures – keep it moving!
- **VOICE:** We should not be able to hear you from across the room
- **PARTICIPATION:** Work by yourself or with one partner



20:00

Name:

Technology at the Trans-Mississippi Exposition

DIRECTIONS: Use the information sheet you're given to answer the questions below. Work alone or with a partner. When you've answered the questions, create an advertisement to convince people that your technology is AMAZING and worth coming to see at the Exposition.

My technology is called:

Who will benefit the most from this technology?

What did people do before this technology was invented?

What problems will this technology solve?

How will this make a positive impact on peoples' daily lives?

Now, create your advertisement on a separate sheet of paper! Be sure to somehow include the information above, whether in words or pictures. Make your advertisement eye-catching and persuasive.

Part Two: Technology Scavenger Hunt

DIRECTIONS: Move around the room at your own pace by yourself or with one other person. Find a technology that was shown at the Trans-Mississippi Exposition that fits into each category. NO REPEATS – you can only use each technology once!

| Find an invention that... | Name of Invention | How did this invention improve lives or solve problems? |
|------------------------------------|-------------------|---|
| Changed how food is grown or eaten | | |
| Improved peoples' health | | |

| | | |
|---|--|--|
| Made it easier to travel | | |
| Made it easier to see in the dark | | |
| Gave people new opportunities for entertainment | | |

REFLECTION QUESTIONS

1. Why do you think the organizers of the Trans-Mississippi Exposition chose to show so many new pieces of technology in their exhibits? What benefit did it have on the Exposition or the city of Omaha?
2. What is one piece of technology you think would be showcased if Omaha hosted the Trans-Mississippi Exposition in 2025?
3. How does this technology make a positive impact on peoples' lives?

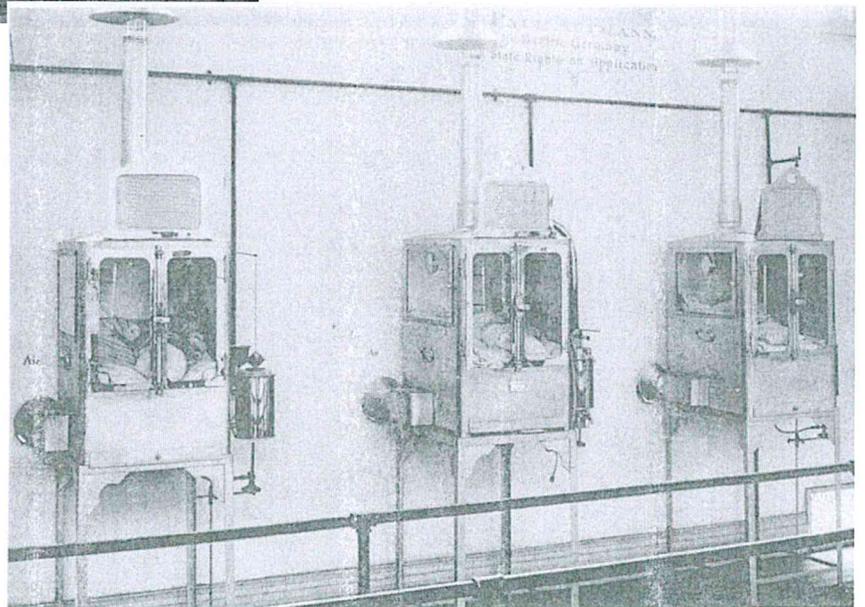
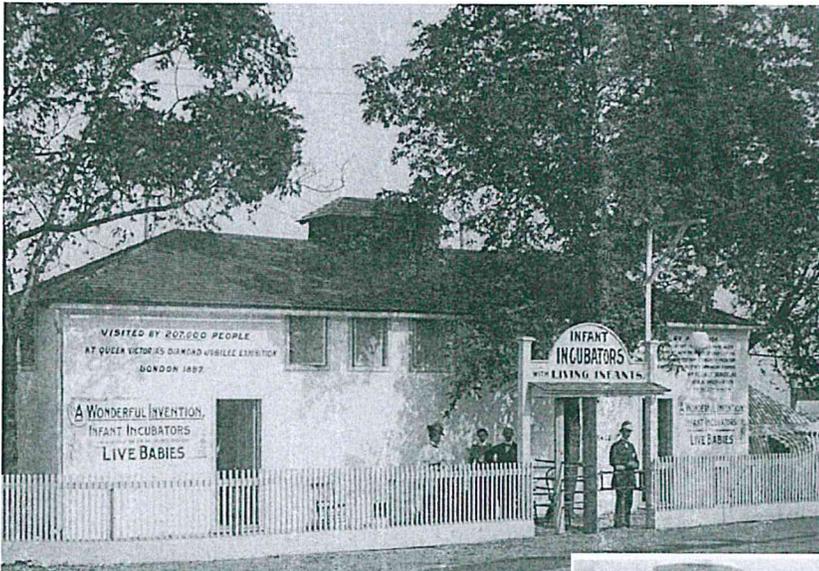
Baby Incubator

The Trans-Mississippi Exposition included the first “Incubator Baby Exhibit” in the United States, after the invention had been shown at expositions in Germany and England in 1896 and 1897. The incubator had been created 10 years earlier and used in research to improve the health of babies born early, but most people had never heard of them and hospitals did not have any.

The Incubator Baby Exhibit at the Trans-Miss included 6 incubators that housed real babies, looked after by a team of doctors and nurses 24 hours a day. The temperatures inside the incubators were kept at a certain level to make sure the babies were in the ideal environment to grow without getting sick.

According to the German doctor who used these incubators for research, 85% of the babies born early who spent time in the incubator lived to become healthy children, a much higher number than before the incubators were invented.

Visitors to the Trans-Mississippi Exposition enjoyed seeing the tiny babies grow, and eyewitnesses claim that the building with the incubators was always crowded.



Prosthetic Limbs

Within the Liberal Arts building, a company that produced artificial limbs had a live exhibit. Visitors could see a man without legs ride a bike, roller skate, and do other activities that showed how effective the artificial, or prosthetic, replacements were – he could do anything a person with their real legs could do!

After the Civil War ended in 1865, prosthetic limbs were in high demand by veterans who had lost an arm or leg in combat. The Civil War produced a record number of veterans who lost a limb. The Union and Confederate armies provided veterans with money to buy prosthetic limbs and travel to a specialist to have it fitted exactly to their body.

Most prosthetics at this time would be made of wood. Leg prosthetics would have a steel joint at the knee and hinges at the ankle and toe, with rubber bands at the ankle so it could bend and springs in the toes. This use of technology allowed those who had lost a leg to walk more naturally than if they had used a “peg leg,” like we think of with pirates, which was just a stump.

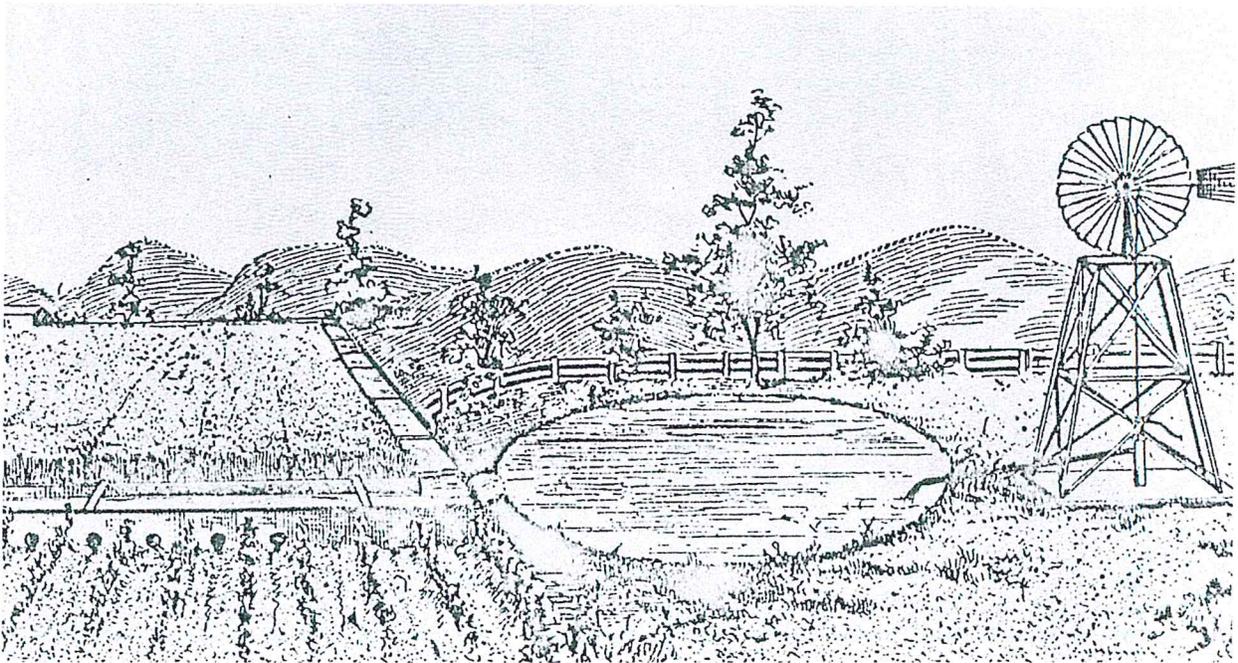


Irrigation

The irrigation exhibit at the Trans-Mississippi showcased technology that directly affected the Western states most significantly. These days, irrigation equipment is like a giant sprinkler to water many acres of farmland that would otherwise be too dry to grow anything on. Western states, including Nebraska, do not get rain often enough, or in big enough amounts, to grow things like wheat and corn that are used in many food products.

In 1898, the newest technology in irrigation was using a windmill to power a pump that brought water up from underground. The water was stored in a small pond and then tiny canals were dug in between rows of plants to make sure they got water, even when it hadn't rained. This technology was especially important because Nebraska had experienced a severe drought between 1890-1896, meaning there was much less rainfall than usual. Farmers were losing money and not producing enough for people to eat.

Irrigation technology meant that farmers could still keep up with demand even without rain.

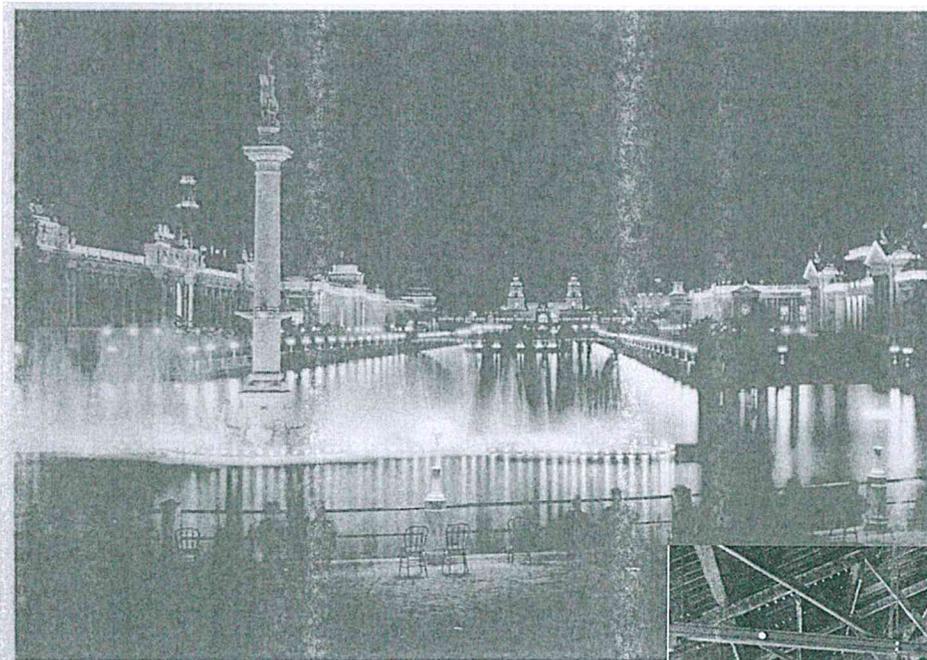


A windmill plant in operation.

Lightbulbs

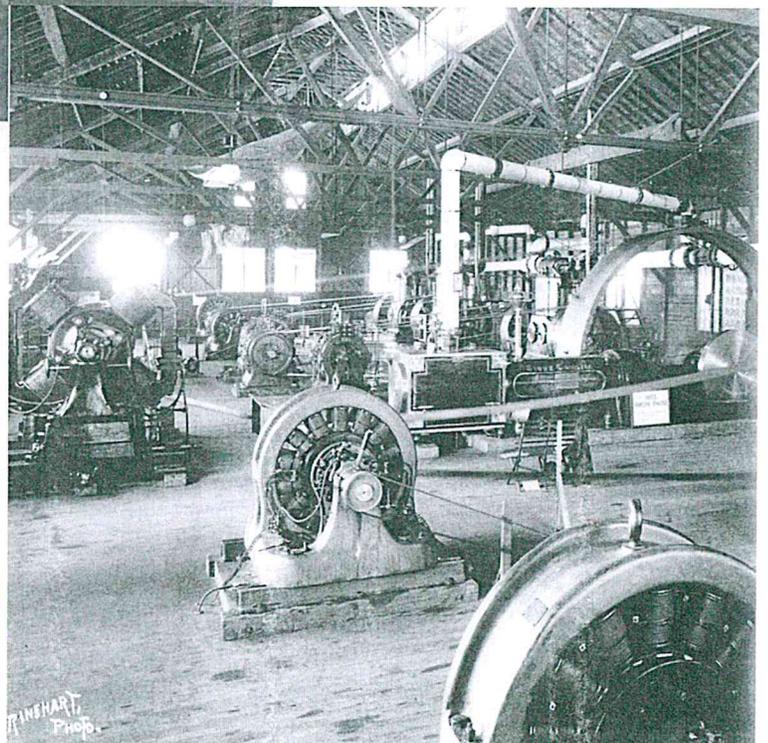
The Trans-Mississippi Exposition was not the first public display of electric lighting, but the display of the Grand Court completely illuminated at night was memorable and innovative. Many western settlers in rural areas, and even those in cities like Omaha, did not have access to electricity in their homes or businesses yet. What's more, the designers of the Grand Court of the Exposition did not just want to show off the technology, but to use it in a magical way – to make the Exposition feel like a dream. They worked hard to hide the wires for the lights and tuck the lightbulbs among the scenery, into the design of buildings, and among greenery, like trees and bushes. Visitors called the Grand Court a “fairylnd.”

The machinery needed behind the scenes to power all of these lights was also on display. Visitors to the Exposition were invited to tour the “Power House” to become more familiar with the science behind electric lights. These tours were very popular, as most people were unfamiliar with the technology.



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GRAND COURT AT NIGHT.



WINEHART
Prop.

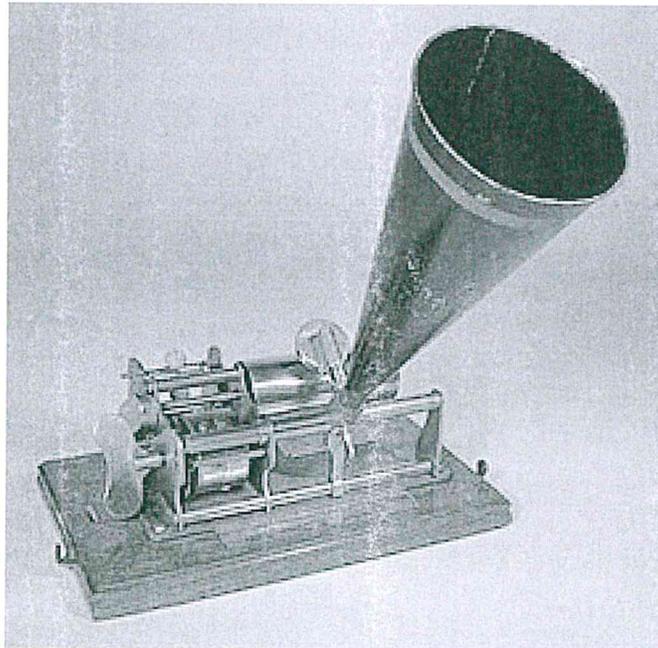
Horseless Carriage

One of the first cars ever seen in Omaha was an exhibit at the Trans-Mississippi Exposition. At that time, people relied on horse-drawn carriages, bicycles, and electric streetcars. Inside the Transportation building (and driven outside!), the wheels on these “horseless carriages” were spun constantly, though no one was allowed to ride. However, the Transportation building also featured steel tracks running through the main aisles. These tracks allowed both train cars and automobiles to be tested and shown off. Automobile technology improved greatly between 1893, when Chicago hosted the World’s Fair, and 1898, so the demonstration of the new horseless carriages was a major selling point for the Trans-Mississippi Exposition.



Graphophone

Inside the Liberal Arts building, a graphophone was on display. The graphophone was an improvement on the original phonograph, which recorded sounds and played them back. It was invented by Alexander Graham Bell, the man who invented the telephone, in 1886. One original goal of the graphophone was for companies to record conversations and, later, telephone calls instead of having their secretaries write down what was discussed in meetings, word-for-word. However, people could use graphophones in their home to listen to music, recordings of people reading books out loud, and religious sermons. Visitors to the Trans-Mississippi Exposition could try out the graphophone by listening to recordings of popular songs and famous speeches.



X-rays

Inside the Electricity and Machinery Building, an electric company exhibited a brand-new medical device: the X-ray machine. Invented just a few years earlier, in 1895, by a German engineer, X-rays had quickly become popular both as a way for doctors to study and heal human bodies, but also as public entertainment. X-ray machines were wheeled out at many public expositions and lectures, where volunteers from the audience would X-ray their hands, heads, and purses.

However, in 1897 – just a year before the Trans-Mississippi Exposition – experiments with the new X-ray machines showed that the radiation from the machine was toxic to guinea pigs, and doctors who had been exposed over and over began getting sick. Visitors to the Trans-Mississippi Exposition were curious about the new technology, but the X-ray machine turned out to be less popular than other innovations on display.

