

HULL HOUSE - JANE ADDAMS

On September 18, 1889, social reformers Jane Addams and Ellen Gates Starr moved into Hull-House, a dilapidated mansion in the midst of the Chicago slums. As you read this excerpt, think about why they undertook this social experiment.

In those early days we were often asked why we had come to live on Halsted Street when we could afford to live somewhere else. I remember one man who used to shake his head and say it was “the strangest thing he had met in his experience,” but who was finally convinced that it was “not strange but natural.”

In time it came to seem natural to all of us that the Settlement should be there. If it is natural to feed the hungry and care for the sick, it is certainly natural to give pleasure to the young, comfort to the aged, and to minister to the deep-seated craving for social intercourse that all men feel. Whoever does it is rewarded by something which, if not gratitude, is at least spontaneous and vital and lacks that irksome sense of obligation with which a substantial benefit is too often acknowledged. . . . From the first it seemed understood that we were ready to perform the humblest neighborhood services. We were asked to wash the newborn babies, and to prepare the dead for burial, to nurse the sick, and to “mind the children.”

Occasionally these neighborly offices unexpectedly uncovered ugly human traits. For six weeks after an operation we kept in one of our three bedrooms a forlorn little baby who, because he was born with a cleft palate, was most unwelcome even to his mother, and we were horrified when he died of neglect a week after he was returned to his home; a little Italian bride of fifteen sought shelter with us one November evening, to escape her husband who had beaten her every night for a week when he returned home from work, because she had lost her wedding ring. . . .

BESSEMER PROCESS:

In August 1875, the Bessemer at Edgar Thomson made their first blow. Cold air shot through the bottom of the vessels and through the molten iron. The heat increased tremendously, burning out impurities in the iron and forming steel. The process was simple, but the effect was extraordinary. In 1893 McClure's Magazine described the results:

Out of each pot roared alternately a ferocious geyser of saffron and sapphire flame, streaked with deeper yellow. From it a light streamed -- a light that flung violet shadows everywhere and made the gray outside rain a beautiful blue. A fountain of sparks arose, gorgeous as ten thousand rockets, and fell with a beautiful curve, like the petals of some enormous flower.

Overhead the beams were glowing orange in a base of purple. The men were yellow where the light struck them, violet in shadow.... The pot began to burn with a whiter flame. Its fluttering, humming roar silenced all else.... A shout was heard, and a tall crane swung a gigantic ladle under the converting vessel, which then mysteriously up-ended, exploding like a cannon a prodigious discharge of star-like pieces of white-hot slag.... Down came the vessel, until out of it streamed the smooth flow of terribly beautiful molten metal. As it ran nearly empty and the ladle swung away, the dropping slag fell to the ground exploding, leaping viciously, and the scene became gorgeous beyond belief, with orange and red and green flame.

TRANSCONTINENTAL RAILROAD:

The Weekly Arizonian Promontory Summit, Utah May 10,

The morning was most auspicious. At 7 A.M. the superintendent of the telegraph company hoisted the Stars and Stripes at the terminus of the Central Pacific track. The Union Pacific Railroad closed the gap of half a mile in their track, leaving but the space to be filled by the last rail. At 9 A.M. the first passenger train of the Union Pacific railroad arrived at this point, coming within a rail's length of the Central Pacific track- The train consisted of one sleeping car and one passenger car, bringing about 30 passengers. At 11:30 the President's train moved to the front, drawn by the fine locomotive Jupiter appropriate name gaily decorated with flag and streamer.

George Booth is engineer and Eli Foster conductor of the train. The enthusiasm is great and still increasing. At least 2,000 persons will meet in mid desert, and warm and earnest greetings are being exchanged between all, for the event makes even stranger friends.

Hon. F. A. Tritle of Nevada offered the silver spike with the following sentiment: "To the iron of the east and gold of the west Nevada adds her link of silver to span the continent and wed the oceans."

Hon. A. P. K. Safford presented a spike of iron, silver and gold, an offering from Arizona, with the sentiment; "Ribbed with iron, clad in silver and crowned with gold, Arizona presents her offering to the enterprise that has banded the continent and made clear a pathway to commerce, Mr. Darkness presented the golden spike from California, with a few sublime remarks. He said the last rail needed to complete the greatest railroad enterprise of the world is about to be laid ; the last spike needed to unite the Atlantic and Pacific by a new line of travel and commerce is about to be driven to its place. To perform these acts, the East and the West have come together. Never, since history commenced her

record of human events, has she been called upon to note the completion of a work so magnificent in conception, so marvellous in execution California, within whose borders and by whose citizens the Pacific Railroad was inaugurated, is desirous to express her appreciation of the last importance to her and her sister States of the great enterprise which, by your joint action, is about to be consummated. From her mine of gold she has forwarded a spike-from her laurel woods she has hewn a tie ; by the hands of her citizens she offers them to become a part of the great highway which is about to unite her in close fellowship with her sisters of the Atlantic.

From her bosom, was taken the first rail let hers be the last tie and the last spike. With them accept the hopes and wishes of her people that the success of your enterprise may not stop short of its brightest promise.

<https://chroniclingamerica.loc.gov/lccn/sn84024829/1869-06-05/ed-1/seq-2/ocr/>



JANE ADDAMS:

. During the same winter three boys from a Hull-House club were injured at one machine in a neighboring factory for lack of a guard which would have cost but a few dollars. When the injury of one of these boys resulted in his death, we felt quite sure that the owners of the factory would share our horror and remorse, and that they would do everything possible to prevent the recurrence of such a tragedy. To our surprise they did nothing whatever, and I made my first acquaintance then with those pathetic documents signed by the parents of working children, that they will make no claim for damages resulting from “carelessness.”

The visits we made in the neighborhood constantly discovered women sewing upon sweatshop work, and often they were assisted by incredibly small children. I remember a little girl of four who pulled out basting threads hour after hour, sitting on a stool at the feet of her Bohemian mother, a little bunch of human misery. But even for that there was no legal redress [remedy], for the only child-labor law in Illinois, with any provision for enforcement, had been secured [achieved] by the coal miners’ unions, and was confined to children employed in mines. . . . There was at that time no statistical information on Chicago industrial conditions, and Mrs. Florence Kelley, an early resident of Hull-House, suggested to the Illinois State Bureau of Labor that they investigate the sweating system [sweatshops] in Chicago with its attendant [use of] child labor. The head of the Bureau adopted this suggestion and engaged Mrs. Kelley to make the investigation. When the report was presented to the Illinois Legislature, a special committee was appointed to look into the Chicago conditions. I well recall that on the Sunday the members of this commission came to dine at Hull-House, our hopes ran high, and we believed that at last some of the worst ills under which our neighbors were suffering would be brought to an end. . . .

Source: Jane Addams, *Twenty Years at Hull-House with Autobiographical Notes*, MacMillan, 1912

TRIANGLE SHIRTWAIST FIRE:

Ethel Monick Feigen

Job: Give Out Trimmings

9th floor

Interviewed: September 29, 1958

I worked on the 9th floor and my job was to give out trimmings. My place was behind a table that I had in front of the windows. Right in back of me was a fire escape. I was working at my table and was getting ready to go home when I picked up my head and outside on the Greene St. side, I saw fire

coming up through the window. I screamed "Fire" and almost as soon as I did that, the flames were all around on the inside. It happened so fast that a lot of people never had a chance. I saw some women at the machines become frozen stiff. They never moved. I ran to the freight elevator on the Greene St. side first but people were hollering that the cable broke.

When I first came to work I was a lace cutter on the 9th floor.

One day I was working and got lost in the shop near the Washington Place side. That was when I saw that there was a door there. In the fire, when I saw the freight elevator was down, then I thought of the Washington Place door. I ran to that door and tried to open it. All around me people were hollering, "I am dying, I am dying." I ran from the door into the dressing room looking for something to use on the door. In the dressing room there were men and women laughing. I did not know at the time that they were hysterical. I hollered, "Let's get a machine head and smash the door in." I remembered the top of the door was with wire glass.

The door was absolutely locked. I went to the window on the Washington Place side. I wanted to fall out. Then I got ashamed about the way I would look. They pushed me back to the elevator and they pushed me right in. When I got to the street I kept murmuring to myself, "It's all a bad dream," and I started to scratch my face and tear my hair because something in me said that would wake me up. I remember a newspaper man took me under my arm. He was from the Journal. He asked me, "What is the matter," and I said, "There were 150 girls up there who will never get out." He took me to a subway. It was the first time I was in a subway because I always went home by the Third Ave. El. My father would give me a nickel to go to work, a nickel to come home and a nickel for lunch. The night of the fire I got home late. I got a licking from my father. He called me a "bummike" and my mother stood in the corner shivering. I kept hollering, "But Pa." but he would not listen and I had to go to sleep. I guess while I was sleeping, they found out the truth because when I got up they were all standing around me and kissing me.

I remember how one time during the trial, after I had been on the witness stand I passed Steuer in the street and he pinched my cheek and said to me with a smile, "So you want to do me out of my fee." I remember his tricks when I was on the stand. He handed me a map and asked me questions about where the doors and tables were in the shop. But he could not fool me because I told him to first turn the map around; you have it upside down.

My oldest son was born March 25, 1915. For years on March 25th I used to walk around scared and frightened not knowing what other terrible thing would happen on that day.

HOMESTEAD STRIKE:

Emma Goldman (Modified)

It was May 1892. Trouble had broken out between the Carnegie Steel Company and its workers, organized in the Amalgamated Association of Iron and Steel Workers. Amalgamated Association was one of the biggest and most efficient unions in the country, consisting mostly of strong Americans, men of decision and grit, who stood up for their rights. The Carnegie Company, on the other hand, was a powerful corporation. Andrew Carnegie, its president, had turned over management to Henry Clay Frick, a man known for his hatred of unions and workers. The Carnegie Company enjoyed great wealth and prosperity. Wages were arranged between the company and the union, according to a sliding scale based on the current market price of steel products. Andrew Carnegie decided to abolish the sliding scale. The company would make no more agreements with the Amalgamated Association. In fact, he would not recognize the union at all. Then, he closed the mills. It was an open declaration of war. The steel-workers declared that they were ready to take up the challenge of Frick: they would insist on their right to organize and to deal collectively with their employers. Their tone was manly, ringing with the spirit of their rebellious forebears of the Revolutionary War. Then the news flashed across the country of the slaughter of steelworkers by Pinkertons. In the dead of night, Frick sent a boat packed with strike-breakers and heavily armed Pinkerton thugs to the mill. The workers stationed themselves along the shore, determined to drive back Frick's hirelings. When the boat got within range, the Pinkertons had opened fire, without warning, killing a number of Homestead men on the shore, among them a little boy, and wounding scores of others. Source: Emma Goldman was political activist and radical who fiercely supported workers' rights. The document above comes from her autobiography, written in 1931, where she remembers her reaction to the Homestead strike, thirty-nine years later.

PULLMAN STRIKE:

Chicago Times

PULLMAN MEN OUT Nearly 4,000 Throw Down Their Tools and Quit Refuse to Work Till Wrongs are Righted Firing Three Men Starts It

Almost the entire force of men employed in the Pullman shops went out on strike yesterday. Out of the 4,800 men and women employed in the various departments there were probably not over 800 at work at 6 o'clock last evening. The immediate cause of the strike was the laying off of three men in the iron machine shop. The real but remote cause is the question of wages over which the men have long been unhappy. The strike of yesterday was ordered by a committee representing every department at the Pullman works. This committee was in session all night Thursday night, and finally came to the conclusion to order a strike 4:30 o'clock yesterday morning. The position of the company is that no increase in wages is possible under the present conditions. The position of the men is that they are receiving less than a living wage, to which they are entitled.

CHILD LABOR:

Joseph Hebergam was interviewed by Michael Sadler and his House of Commons Committee on 7th July, 1832.

Question: At what age did you start work?

Answer: Seven years of age.

Question: At whose mill?

Answer: George Addison's Bradley Mill, near Huddersfield.

Question: What were your hours of labour?

Answer: From five in the morning till eight at night.

Question: What intervals had you for refreshment?

Answer: Thirty minutes at noon.

Question: Had you no time for breakfast or refreshment in the afternoon?

Answer: No, not one minute; we had to eat our meals as we could, standing or otherwise.

Question: You had fourteen and a half hours of actual labour, at seven years of age?

Answer: Yes.

Question: Did you become very drowsy and sleepy towards the end of the day?

Answer: Yes; that began about three o'clock; and grew worse and worse, and it came to be very bad towards six and seven.

Question: How long was it before the labour took effect on your health?

Answer: Half a year.

Question: How did it affect your limbs?

Answer: When I worked about half a year a weakness fell into my knees and ankles: it continued, and it got worse and worse.

Question: How far did you live from the mill?

Answer: A good mile.

Question: Was it painful for you to move?

Answer: Yes, in the morning I could scarcely walk, and my brother and sister used, out of kindness, to take me under each arm, and run with me to the mill, and my legs dragged on the ground; in consequence of the pain I could not walk.

Question: Were you sometimes late?

Answer: Yes, and if we were five minutes too late, the overlooker would take a strap, and beat us till we were black and blue.

Question: When did your brother start working in the mill?

Answer: John was seven.

Question: Where is your brother John Working now?

Answer: He died three years ago.

Question: What age was he when he died?

Answer: Sixteen years and eight months.

Question: What was his death attributed to?

Answer: He died from a spinal affection after working long hours in the factory?

Question: Did his medical attendants state that the spinal affection was owing to his having been so over-laboured at the mill?

Answer: Yes.

Question: Have you found that, on the whole, you have been rendered ill, deformed and miserable, by the factory system?

Answer: Yes. If I had a thousand pounds, I would give them to have the use of my limbs again.

JOHN D ROCKEFELLER



“The American Beauty Rose can be produced in all its splendor only by sacrificing the early buds that grow up around it.”

— John D. Rockefeller, Jr.

Source: Guy R. Spencer, *The Literary Digest*, May 1905 (adapted)

Regarding Competition

The American Beauty Rose can be produced in the splendor and fragrance which bring cheer to its beholder only by sacrificing the early buds which grow up around it. This is not an evil tendency in business. It is merely the working-out of a law of nature and a law of God.

Address to Brown University students, 1904

Regarding Making Money

I believe the power to make money is a gift of God ... to be developed and used to the best of our ability for the good of mankind. Having been endowed with the gift I possess, I believe it is my duty to make money and still more money and to use the money I make for the good of my fellow man according to the dictates of my conscience.

Meatpacking Workers FIX THIS BEFORE WE USE IT

AGAIN<https://www.ourgreatamericanheritage.com/2015/09/disease-death-and-child-labor-the-birth-of-the-meatpacking-industry-in-chicago/>

It was January 12, 1909, and the weather in Chicago was typical – freezing cold, and the wind coming off the Chicago river was harsh. Early that morning, John Panzezyk set off from his dismal tenement home in the Stockyard district to walk the short distance to his job at a meatpacking plant. His work days were usually 12 to 15 hours, and this day, he was simply hoping to stay warm. He said goodbye to his wife and four small children. Sadly, it would be the last time they would see him alive. Later that day, John was killed at work when he got caught in the belting of a large meat machine. In a time when big business ruled, and workers had no rights, and certainly no extended benefits, it is likely that Mrs. Panzezyk and her children would soon become destitute, and possibly homeless. The reality of this terrible event offers a small window into the family tragedy that would have certainly followed. The story of John Panzezyk serves as just one example of the realities that Upton Sinclair was trying to express.

Sadly, there are numerous accounts of the premature deaths of the workers. Upton Sinclair spoke to that in his novel *The Jungle* :

“And as for the other men, who worked in tank rooms full of steam, and in some of

which there were open vats near the level of the floor, their peculiar trouble was that they fell into the vats; and when they were fished out, there was never enough of

them left to be worth exhibiting,—sometimes they would be overlooked for days,

till all but the bones of them had gone out to the world as Durham’s Pure Leaf Lard!”

The **Chicago meatpacking** business was a deadly one. As the scale and size of their facilities increased, so did the dangers. By the 1880s, the European meat markets closed their doors to imported American meat. America’s many “>**stockyards** were known to be filthy, and a breeding ground for diseased meat. Many of the meats were rancid, rat infested, and bacteria filled. Workers had few, if any, or no guidelines regarding the quality control of their products. Rules about their safety in the workplace did not exist. Wearing gloves or hair nets was not a consideration. In addition to being handled by unclean workers in an unsanitary environment, large volumes of meat were not always refrigerated. Despite the widespread use of brining or salting meat, some of the processed

meat was not always properly preserved. The biggest concern, however, was whether or not the live cow or hog was diseased before it went to the processing plant.

It is difficult to say how many Europeans, as well as Americans, became sick, or died, because of the diseased meat. The Europeans claimed that the meat caused pleuro-pneumonia and cholera. A combination of both pleurisy and pneumonia, the nasty respiratory infection only caused vomiting, diarrhea, sometimes bloody diarrhea, chills, sweats, and intense pain in the abdomen. The not so lucky ones died. And, if you had the misfortune of dining on cholera infected meat, (massive infection of the intestines), your chances of survival were slim.

Recent science would suggest that there was a lot more going on than just cholera and pneumonia. In the days before health inspections, notwithstanding any regulations related to the quality control of both animals and the processing of meat, a number of different bacterias infected the meat. Bovine tuberculosis was usually found in raw milk, but it also showed up in infected animals, especially when the meat was undercooked. The impact on humans who ingested this meat was the passing of tuberculosis bacteria, a deadly lung infection. Brucellosis, anthrax, and the trichinosis bacteria are just a few more likely contaminants in the diseased meat.

These bacteria, along with the others, caused serious illnesses, and like the others, in many cases death.

Chicago meatpackers understood that to survive they also needed to sell their products in the European market. Chicago 1900 became the central home of the American industry and small companies began merging with one another. By the turn of the last century there were only five or six mammoth meatpacking companies, and they controlled the majority of meatpacking in America. The problem was, that they still had not penetrated the European market.

The answer, of course, was that the industry needed regulation. They needed to literally clean up their processing facilities, set standards for their workers, and enlist field inspectors for the animals. It was the meatpacking industry itself which pursued the government to bring about federal legislation and regulation to their business.

Why would an industry want itself to be regulated? Did big business suddenly have a conscience and want to find some moral high ground when it came to safer ways of feeding the world? No, ..., of course not! The answer was supplied by the late historian Gabriel Kolko. It seems that many small meatpacking companies were undercutting the Chicago big boys, and had been for a long time. And, they felt it was time to drive them out of business. Kolko argued that the federal legislation that the big meatpackers were pushing for was easily affordable to them, but the cost would put the little companies out of business. And that is exactly what happened. The big boys could simply increase their prices to cover the cost of the new regulations. So, it really wasn't about the meat packers doing the right thing to make the world and their employees safe. It was about making money.

By rough estimates, thousands of children were working in the Chicago meatpacking business at the turn of the century. Because of the low wages, immigrant families, like many other families, were forced to live on a family wage. Sometimes, children worked as long as their parents, usually 10 to 15 hours a day. Their living accommodations were essentially an extension of the hell that they endured during the day. It was also an extension of the control the meat packers had over their workers.

The Stockyard community was the residential area next to the stockyards, and the many meatpacking plants in Chicago. It was close to the Chicago river, and only minutes from work. It was convenient, and the great majority of the workers lived in this dismal, loud, and overcrowded area. Most importantly, the rent was affordable.

Sometimes as many as seven families used one outdoor bathroom. Depending on the time of year, the streets were full of mud and excrement from overflowing cesspools. To add to the misery, the Stockyards were surrounded by the city's dumps. The garbage stench, and the smell from the vile waste of the meatpacking plants, that floated down the Chicago river, had to be overbearing.

Workplace accidents, like John Panzezyk's, were all too common. Additionally, there were a number of nightmare diseases connected with working in the plants. Before the age of throw-away gloves and protective clothing, skin infections were a source of chronic concern. Workers, who were unfortunate enough to be assigned to the pickle rooms (pickling meats and sausage was fashionable before freezers became widespread), many times developed a very nasty infection from constantly

handling cold meat with their hands. The medical term was called dermatocniosis; the workers, however, gave the infection a more appropriate term — pickled hands.

Pickled hands? The idea of a person's hands actually becoming "pickled" is beyond understanding. After the skin turned red, it then hardened and cracked. The skin would split and open, sometimes all the way to the bone. Horrible sores would then develop on the workers palms and the back of their hands. It would take at least two months or more to heal; and, that was if they were allowed to work in another department so the infection could heal. Some infected workers just continued handling and contaminating the meat — despite their hands essentially being "pickled", and, as long as they could stand it.

Another common skin infection was the tubular wart, but the yard workers called the disgusting infection cut worm. Cut worm came from handling hog intestines. Large warts grew rapidly on the workers hands and split open and developed into ulcers. Workers did not use gloves until after WWI.

Although most of the infections described were ghastly, they generally did not lead to death. Workers, however, working in the wool, hair, or the bone grinding department, stood a good chance of contracting a serious lung infection, which many times developed into chronic coughs, then pneumonia, and ultimately death.

Arguably, the job with the highest risk of death belonged to the men working in the massive carcass coolers. Imagine working 10 to 15 hours a day dragging animal carcasses in and out of warm air into refrigerated cooler units, and doing this for days, weeks, years, and even decades. It doesn't take a big stretch of the imagination to realize that these workers would suffer, and did, a much higher rate of cardiovascular, respiratory, and many other illnesses.

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which there were open vats near the level of the floor, their peculiar trouble was that they fell into the vats; and when they were fished out, there was never enough of them left to be worth exhibiting,—sometimes they would be overlooked for days, till all but the bones of them had gone out to the world as Durham’s Pure Leaf Lard!”

Working at meatpacking houses was dangerous because of accidents, as well as potential worker diseases. At the turn of the last century, the bosses of the meatpacking industry viewed workers as totally replaceable, expendable, and with only limited value to them.

A century, and more, has passed since these dark days of the meatpacking industry. The dark days, however, did not end. In a 1999 Bureau of Labor Statistics report, meatpacking was determined to be the most dangerous occupation in America. It also determined that at least one quarter of meatpackers suffered serious injury or illness in their careers. Injuries in the meatpacking business were five times the national average. According to historian [Eric Schlosser](#), the meatpacking industry has a well-documented history of discouraging injury reports, falsifying injury data, and putting injured workers back on the job quickly to minimize the reporting of lost workdays.

IDA TARBELL

Ida M. Tarbell, “The History of the Standard Oil Company,” McClure’s Magazine, 1902-1904

Mr. Rockefeller . . . secured an alliance with the railroads to drive out rivals. For fifteen years he received rebates of varying amounts on at least the greater part of his shipments, and for at least a portion of that time he collected drawbacks of the oil other people shipped; at the same time he worked with the railroads to prevent other people getting oil to manufacture, or if they got it he worked with the railroads to prevent the shipment of the product. If it reached a dealer, he did his utmost to bully or wheedle him to countermand his order. If he failed in that, he undersold until the dealer, losing on his purchase, was glad enough to buy thereafter of Mr. Rockefeller. There is no independent refiner or jobber who tries to ship oil freight that does not meet incessant discouragement and discrimination. .

. “If I get a barrel of oil out of Buffalo,” an independent dealer told the writer not long ago, “I have to sneak it out. There are no public docks; the railroads control most of them, and they won’t let me out if they can help it. If I want to ship a car-load they won’t take it if they can help it. They are all afraid of offending the Standard Oil Company.” . .

HENRY FORD

The Ford Motor Company manufactured its first car - the Model A - in 1903. By 1906, the Model N was in production but Ford had not yet achieved his goal of producing a simple, affordable car. He would accomplish this with the Model T. Charles Sorensen - who had joined Henry Ford two years earlier - describes how Ford had him set up a secret room where design of the new car would be carried out:

"Early one morning in the winter of 1906-7, Henry Ford dropped in at the pattern department of the Piquette Avenue plant to see me. 'Come with me, Charlie,' he said, 'I want to show you something.'

I followed him to the third floor and its north end, which was not fully occupied for assembly work. He looked about and said, 'Charlie, I'd like to have a room finished off right here in this space. Put up a wall with a door in big enough to run a car in and out. Get a good lock for the door, and when you're ready, we'll have Joe Galamb come up in here. We're going to start a completely new job.'

The room he had in mind became the maternity ward for Model T.

It took only a few days to block off the little room on the third floor back of the Piquette Avenue plant and to set up a few simple power tools and Joe Galamb's two blackboards. The blackboards were a good idea. They gave a king-sized drawing which, when all initial refinements had been made, could be photographed for two purposes: as a protection against patent suits attempting to prove prior claim to originality and as a substitute for blueprints. A little more than a year later Model T, the product of that cluttered little room, was announced to the world. But another half year passed before the first Model T was ready for what had already become a clamorous market...

The summer before, Mr. Ford told me to block off the experimental room for Joe Galamb, a momentous event occurred which would affect the entire automotive industry. The first heat of vanadium steel in the country was poured at the United Steel Company's plant in Canton, Ohio.

Early that year we had several visits from J. Kent Smith, a noted English metallurgist from a country which had been in the forefront of steel development...Ford, Wills, and I listened to him and examined his data. We had already read about this English vanadium steel. It had a tensile strength nearly three times that of steels we were using, but we'd never seen it. Smith demonstrated its toughness and showed that despite its strength it could be machined more easily than plain steel. Immediately Mr. Ford sensed the great possibilities of this shock-resisting steel. 'Charlie,' he said to me after Smith left, 'this means entirely new design requirements, and we can get a better, lighter, and cheaper car as a result of it.'

It was the great common sense that Mr. Ford could apply to new ideas and his ability to simplify seemingly complicated problems that made him the pioneer he was. This demonstration of vanadium steel was the deciding point for him to begin the experimental work that resulted in Model T...

Actually it took four years and more to develop Model T. Previous models were the guinea pigs, one might say, for experimentation and development of a car which would realize Henry Ford's dream of a car which anyone could afford to buy, which anyone could drive anywhere, and which almost anyone could keep in repair. Many of the world's greatest mechanical discoveries were accidents in the course of other experimentation. Not so Model T, which ushered in the motor transport age and set off a chain reaction of machine production now known as automation. All our experimentation at Ford in the early days was toward a fixed and, then wildly fantastic goal.

By March, 1908, we were ready to announce Model T, but not to produce it, On October 1 of that year the first car was introduced to the public. From Joe Galamb's little room on the third floor had come a revolutionary vehicle. In the next eighteen years, out of Piquette Avenue, Highland Park, River Rouge, and from assembly plants all over the United States came 15,000,000 more."

WRIGHT BROTHERS

The conditions on the morning of December 17 were perfect for flight - high, consistent winds blowing from the north. At about 10:30 that morning, Orville Wright lay down on the plane's wing surface and

brought its engine to life in preparation of launching it and himself into history. His diary tells the story:

"When we got up, a wind of between 20 and 25 miles was blowing from the north.

We got the machine out early and put out the signal for the men at the station. Before we were quite ready, John T. Daniels, W. S. Dough, A. D. Etheridge, W. C. Brinkley of Manteo, and Johnny Moore of Nags Head arrived.

After running the engine and propellers a few minutes to get them in working order, I got on the machine at 10:35 for the first trial. The wind, according to our anemometers at this time, was blowing a little over 20 miles (corrected) 27 miles according to the Government anemometer at Kitty Hawk. On slipping the rope the machine started off increasing in speed to probably 7 or 8 miles. The machine lifted from the truck just as it was entering on the fourth rail. Mr. Daniels took a picture just as it left the tracks.

I found the control of the front rudder quite difficult on account of its being balanced too near the center and thus had a tendency to turn itself when started so that the rudder was turned too far on one side and then too far on the other. As a result the machine would rise suddenly to about 10 ft. and then as suddenly, on turning the rudder, dart for the ground. A sudden dart when out about 100 feet from the end of the tracks ended the flight. Time about 12 seconds (not known exactly as watch was not promptly stopped). The lever for throwing off the engine was broken, and the skid under the rudder cracked. After repairs, at 20 min. after 11 o'clock Will made the second trial.

The course was about like mine, up and down but a little longer over the ground though about the same in time. Dist. not measured but about 175 ft. Wind speed not quite so strong. With the aid of the station men present, we picked the machine up and carried it back to the starting ways. At about 20 minutes till 12 o'clock I made the third trial. When out about the same distance as Will's, I met with a strong gust from the left which raised the left wing and sidled the machine off to the right in a lively manner. I immediately turned the rudder to bring the machine down and then worked the end control. Much to our surprise, on reaching the ground the left wing struck first, showing the lateral control of this

machine much more effective than on any of our former ones. At the time of its sidling it had raised to a height of probably 12 to 14 feet.

At just 12 o'clock Will started on the fourth and last trip. The machine started off with its ups and downs as it had before, but by the time he had gone over three or four hundred feet he had it under much better control, and was traveling on a fairly even course. It proceeded in this manner till it reached a small hummock out about 800 feet from the starting ways, when it began its pitching again and suddenly darted into the ground.

The front rudder frame was badly broken up, but the main frame suffered none at all. The distance over the ground was 852 feet in 59 seconds. The engine turns was 1071, but this included several seconds while on the starting ways and probably about a half second after landing. The jar of landing had set the watch on machine back so that we have no exact record for the 1071 turns. Will took a picture of my third flight just before the gust struck the machine.

The machine left the ways successfully at every trial, and the tail was never caught by the truck as we had feared.

After removing the front rudder, we carried the machine back to camp. We set the machine down a few feet west of the building, and while standing about discussing the last flight, a sudden gust of wind struck the machine and started to turn it over. All rushed to stop it. Will who was near one end ran to the front, but too late to do any good. Mr. Daniels and myself seized spars at the rear, but to no purpose. The machine gradually turned over on us. Mr. Daniels, having had no experience in handling a machine of this kind, hung on to it from the inside, and as a result was knocked down and turned over and over with it as it went. His escape was miraculous, as he was in with the engine and chains. The engine legs were all broken off, the chain guides badly bent, a number of uprights, and nearly all the rear ends of the ribs were broken. One spar only was broken.

After dinner we went to Kitty Hawk to send off telegram to M.W. While there we called on Capt. and Mrs. Hobbs, Dr. Cogswell and the station men."

References:

Orville Wright's diary appears in: McFarland, Marvin, The Papers of Wilbur & Orville Wright (2001); Crouch, Tom D., The Bishop's Boys: A Life of Wilbur and Orville Wright (1989); Wright, Orville, How We Invented the Airplane (1953).

THOMAS EDISON:

The normal sixty-hour work week typically stretched to eighty hours. As Charles Clarke recalled:

Laboratory life with Edison was a strenuous but joyous life for all, physically, mentally and emotionally. We worked long night hours during the week, frequently to the limit of human endurance; and then we had time off from Saturday to late Sunday afternoon for rest and recreation. . . . Here breathed a little community of kindred spirits, all in young manhood, enthusiastic about their work, expectant of great results; moreover often loudly emphatic in joke and vigorous in action.

Demonstrating the New Light

Edison quickly moved forward with his plans to publicly exhibit the light and gave John Kruesi the task of overseeing the preparations, which he detailed in an [order book](#). Edison's staff wired the laboratory complex, houses, and other buildings at Menlo Park and set up a line of poles with lamps to light the streets, all connected with a generator located in the machine shop. Reports of the successful demonstration for the Electric Light Company investors on December 27 brought large crowds of curiosity-seekers to see the new system as it was exhibited during the New Year holiday.

[On December 30](#), according to the *New York Herald*, "Menlo Park [was] thronged with visitors coming from all directions to see the 'wonderful' electric light. Nearly every train that stopped brought delegations of sightseers until the depot was overrun and the narrow plank road leading to the laboratory became alive with people. In the laboratory the throngs practically took possession of everything in their eager curiosity to learn about the great invention." Somehow amidst all the confusion final preparations were finished for the public demonstration the following day.

The *Herald* described another enthusiastic crowd for the [New Year's Eve demonstration](#):

Extra trains were run from east and west, and notwithstanding the stormy weather, hundreds of persons availed themselves of the privilege. The laboratory was brilliantly illuminated with twenty-five lamps, the office and counting room with eight, and twenty others were distributed in the street leading to the depot and in some of the adjoining houses. The entire system was explained in detail by Edison and his assistants, and the light was subjected to a variety of tests.

The front page of the [New York Daily Graphic](#) depicted the demonstrations.

The following day the large crowds again came to the laboratory where they "went pellmell through the places previously kept sacredly private." By the end of the day, the [Herald reported](#), Edison felt compelled to order the laboratory closed to the general public, "directing, however, that the private dwelling in Menlo Park, as well as the street lamps, be kept burning nightly, so that those who come will not be disappointed."

PUSH FACTORS

Marty Antin - Life for Jews in Russia under the czar

[Mary Antin, *The Promised Land* \(1912\)](#)

The Gentiles used to wonder at us because we cared so much about religious things about food and Sabbath and teaching the children Hebrew. They were angry with us for our obstinacy, as they called it, and mocked us and ridiculed the most sacred things. There were wise Gentiles who understood. These were educated people, like Fedora Pavlovna, who made friends with their Jewish neighbors. They were always respectful and openly admired some of our ways. But most of the Gentiles were ignorant. There was one thing, however, the Gentiles always understood, and that was money. They would take any kind of bribe, at any time. They expected it. Peace cost so much a year, in Polotzk. If you did not keep

on good terms with your Gentile neighbors, they had a hundred ways of molesting you. If you chased their pigs when they came rooting up your garden, or objected to their children maltreating your children, they might complain against you to the police, stuffing their case with false accusations and false witnesses. If you had not made friends with the police, the case might go to court; and there you lost before the trial was called unless the judge had reason to befriend you.

The czar was always sending us commands - you shall not do this and you shall not do that - till there was very little left that we might do, except pay tribute and die. One positive command he gave us: You shall love and honor your emperor. In every congregation a prayer must be said for the czar's health, or the chief of police would close the synagogue. On a royal birthday every house must fly a flag, or the owner would be dragged to a police station and be fined twenty-five rubles. A decrepit old woman, who lived all alone in a tumble-down shanty, supported by the charity of the neighborhood, crossed her paralyzed hands one day when flags were ordered up, and waited for her doom, because she had no flag. The vigilant policeman kicked the door open with his great boot, took the last pillow from the bed, sold it, and hoisted a flag above the rotten roof.

The czar always got his dues, no matter if it ruined a family. There was a poor locksmith who owed the czar three hundred rubles, because his brother had escaped from Russia before serving his time in the army. There was no such fine for Gentiles, only for Jews; and the whole family was liable. Now the locksmith never could have so much money, and he had no valuables to pawn. The police came and attached his household goods, everything he had, including his bride's trousseau; and the sale of the goods brought thirty-five rubles. After a year's time the police came again, looking for the balance of the czar's dues. They put their seal on everything they found.

There was one public school for boys, and one for girls, but Jewish children were admitted in limited numbers - only ten to a hundred; and even the lucky ones had their troubles. First, you had to have a tutor at home, who prepared you and talked all the time about the examination you would have to pass, till you were scared. You heard on all sides that the brightest Jewish children were turned down if the examining officers did not like the turn of their noses. You went up to be examined with the other Jewish children, your heart heavy about that matter of your nose. There was a special examination for the Jewish candidates, of course: a nine-year-old Jewish child had to answer questions that a

thirteen-year-old Gentile was hardly expected to answer. But that did not matter so much; you had been prepared for the thirteen-year-old test. You found the questions quite easy. You wrote your answers triumphantly - and you received a low rating, and there was no appeal.

I used to stand in the doorway of my father's store munching an apple that did not taste good any more, and watch the pupils going home from school in twos and threes; the girls in neat brown dresses and black aprons and little stiff hats, the boys in trim uniforms with many buttons. They had ever so many books in the satchels on their backs. They would take them out at home, and read and write, and learn all sorts of interesting things. They looked to me like beings from another world than mine. But those whom I envied had their troubles, as I often heard. Their school life was one struggle against injustice from instructors, spiteful treatment from fellow students, and insults from everybody. They were rejected at the universities, where they were admitted in the ratio of three Jews to a hundred Gentiles, under the same debarring entrance conditions as at the high school: especially rigorous examinations, dishonest marking, or arbitrary rulings without disguise. No, the czar did not want us in the schools.

ELLIS ISLAND

Angelo Pellegrini, stayed on Ellis Island for three days when her family arrived from Italy.

We lived there for three days - mother and we five children, the youngest of whom was three years old. Because of the rigorous physical examination that we had to submit to, particularly of the eyes, there was this terrible anxiety that one of us might be rejected. And if one of us was, what would the rest of the family do? My sister was indeed momentarily rejected; she had been so ill and had cried so much that her eyes were absolutely bloodshot, and mother was told, "Well, we can't let her in." but fortunately, mother was an indomitable spirit and finally made them understand that if her child had a few hours' rest and a little bite to eat she would be all right. In the end we did get through.

Maxim Gorky wrote to Leonid Andreev about his first impressions of New York (11th April, 1906)

It is such an amazing fantasy of stone, glass, and iron, a fantasy constructed by crazy giants, monsters longing after beauty, stormy souls full of wild energy. All these Berlins, Parises, and other "big" cities are trifles in comparison with New York. Socialism should first be realized here - that is the first thing you think of, when you see the amazing houses, machines, etc.

TENEMENTS

Jacob Riis

Be a little careful, please! The hall is dark and you might stumble over the children pitching pennies back there. Not that it would hurt them; kicks and cuffs are their daily diet. They have little else. Here where the hall turns and dives into utter darkness is a step, and another, another. A flight of stairs. You can feel your way, if you cannot see it. Close? Yes! What would you have? All the fresh air that ever enters these stairs comes from the hall door that is forever slamming, and from the windows of dark bedrooms that in turn receive from the stairs their sole supply of the elements God meant to be free, but man deals out with such niggardly hand. That was a woman filling her pail by the hydrant you just bumped against. The sinks are in the hallway, that all the tenants may have access—and all be poisoned alike by their summer stench. Hear the pump squeak! It is the lullaby of tenement house babes. In summer, when a thousand thirsty throats pant for a cooling drink in this block, it is worked in vain. But the saloon, whose open door you passed in the hall, is always there. The smell of it has followed you up. Here is a door. Listen! That short hacking cough, that tiny, helpless wail—what do they mean? They mean that the soiled bow of white [a sign of a recent birth] you saw on the door downstairs will have another story to tell—Oh! a sadly familiar story—before the day is at an end. The child is dying with measles. With half a chance it might have lived; but it had none. That dark bedroom killed it.

JACOB RIIS

In a room not thirteen feet either way slept twelve men and women, two or three in bunks set in a sort of alcove, the rest on the floor. A kerosene lamp burned dimly in the fearful atmosphere, probably to guide other and later arrivals to their “beds,” for it was only just past midnight. A baby’s fretful wail came from an adjoining hall-room, where, in the semi-darkness, three recumbent [lying down] figures could be made out. The “apartment” was one of three in two adjoining buildings we had found, within half an hour, similarly crowded. Most of the men were lodgers, who slept there for five cents a spot.



"Lodgers in a Crowded Bayard Street Tenement—'Five Cents a Spot,'" Jacob Riis, ca 1890. From the collection of Museum of the City of New York, 90.13.1.158.

UPTON SINCLAIR'S *THE JUNGLE*

Cut up by the two-thousand-revolutions- a-minute flyers, and mixed with half a ton of other meat, no odor that ever was in a ham could make any difference. There was never the least attention paid to what was cut up for sausage; there would come all the way back from Europe old sausage that had been rejected, and that was moldy and white – it would be dosed with borax and glycerin, and dumped into the hoppers, and made over again for home consumption.

There would be meat that had tumbled out on the floor, in the dirt and sawdust, where the workers had tramped and spit uncounted billions of consumption germs. There would be meat stored in great piles in rooms; and the water from leaky roofs would drip over it, and thousands of rats would race about on it. It was too dark in these storage places to see well, but a man could run his hand over these piles of meat and sweep off handfuls of the dried dung of rats. These rats were nuisances, and the packers would put poisoned bread out for them; they would die, and then rats, bread, and meat would go into the hoppers together. This is no fairy story and no joke; the meat would be shoveled into carts, and the man who did the shoveling would not trouble to lift out a rat even when he saw one – there were things that went into the sausage in comparison with which a poisoned rat was a tidbit.

There was no place for the men to wash their hands before they ate their dinner, and so they made a practice of washing them in the water that was to be ladled into the sausage. There were the butt-ends of smoked meat, and the scraps of corned beef, and all the odds and ends of the waste of the plants, that

would be dumped into old barrels in the cellar and left there. Under the system of rigid economy which the packers enforced, there were some jobs that it only paid to do once in a long time, and among these was the cleaning out of the waste barrels. Every spring they did it; and in the barrels would be dirt and rust and old nails and stale water – and cartload after cartload of it would be taken up and dumped into the hoppers with fresh meat, and sent out to the public's breakfast. Some of it they would make into "smoked" sausage – but as the smoking took time, and was therefore expensive, they would call upon their chemistry department, and preserve it with borax and color it with gelatin to make it brown. All of their sausage came out of the same bowl, but when they came to wrap it they would stamp some of it "special," and for this they would charge two cents more a pound.

BROOKLYN BRIDGE

Frank Harris arrived in New York City from his native Ireland in 1871. The fifteen-year-old moved into a Brooklyn boarding house where a fellow resident - Mike - told him of jobs paying five dollars a day for working in the Brooklyn Bridge caissons. We join Frank's story as he and Mike go to the construction site: "Next morning Mike took me to Brooklyn Bridge soon after five o'clock to see the contractor; he wanted to engage Mike at once but shook his head over me. 'Give me a trial,' I pleaded; 'you'll see I'll make good.' After a pause, 'O.K.,' he said; 'four shifts have gone down already underhanded: you may try.'

In the bare shed where we got ready, the men told me no one could do the work for long without getting the 'bends'; the 'bends' were a sort of convulsive fit that twisted one's body like a knot and often made you an invalid for life. They soon explained the whole procedure to me. We worked, it appeared, in a huge bell-shaped caisson of iron that went to the bottom of the river and was pumped full of compressed air to keep the water from entering it from below: the top of the caisson is a room called the 'material chamber,' into which the stuff dug out of the river passes up and is carted away. On the side of the caisson is another room, called the 'air-lock,' into which we were to go to be 'compressed.' As the compressed air is admitted, the blood keeps absorbing the gasses of the air till the tension of the gasses in the blood becomes equal to that in the air: When this equilibrium has been reached, men can work in the caisson for hours without serious discomfort, if sufficient pure air is constantly pumped in. It was the foul air that did the harm, it appeared. 'If they'd pump in good air, it would be O.K.; but that would cost a little time and trouble, and men's lives are cheaper.' I saw that the men wanted to warn me, thinking I was too young, and accordingly I pretended to take little heed.

When we went into the 'air-lock' and they turned on one air-lock after another of compressed air, the men put their hands to their ears and I soon imitated them, for the pain was very acute. Indeed, the drums of the ears are often driven in and burst if the compressed air is brought in too quickly. I found that the best way of meeting the pressure was to keep swallowing air and forcing it up into the middle ear, where it acted as an air-pad on the innerside of the drum. . . . When the air was fully compressed, the door of the air-lock opened at a touch and we all went down to work with pick and shovel on the gravelly bottom. My headache soon became acute. The six of us were working naked to the waist in a small iron chamber with a temperature of about 80 degrees Fahrenheit: in five minutes the sweat was pouring from us, and all the while we were standing in icy water that was only kept from rising by the terrific air pressure. No wonder the headaches were blinding. The men didn't work for more than ten minutes at a time, but I plugged on steadily, resolved to prove myself and get constant employment; only one man, a Swede named Anderson, worked at all as hard.

The amount done each week was estimated, he told me, by an inspector. Anderson was known to the contractor and received half a wage extra as head of our gang. He assured me I could stay as long as I liked, but he advised me to leave at the end of a month: it was too unhealthy: above all, I mustn't drink and should spend all my spare time in the open. He was kindness itself to me, as indeed were all the others. After two hours' work down below we went up into the air-lock room to get gradually 'decompressed,' the pressure of air in our veins having to be brought down gradually to the usual air pressure. The men began to put on their clothes and passed round a bottle of schnapps; but though I was soon as cold as wet rat and felt depressed and weak to boot, I would not touch the liquor. In the shed above I took a cupful of hot cocoa with Anderson, which stopped the shivering, and I was soon able to face the afternoon's ordeal.

For three or four days things went fairly well with me, but on the fifth day or sixth we came on a spring of water, or 'gusher,' and were wet to the waist before the air pressure could be increased to cope with it. As a consequence, a dreadful pain shot through both my ears: I put my hands to them tight and sat still for little while. Fortunately, the shift was almost over and Anderson came with me to the horse-car. 'You'd better knock off,' he said. 'I've known 'em go deaf from it.'

...One day, just as the 'decompression' of an hour and a half was ending, an Italian named Manfredi fell down and writhed about, knocking his face on the floor till the blood spurted from his nose and mouth. When we got him into the shed, his legs were twisted like plaited hair. The surgeon had him taken to the hospital. I made up my mind that a month would be enough for me."

References:

Frank Harris' account appears in: Harris, Frank, My Life and Loves (1963, originally published in 1922); McCullough, David, The Great Bridge: The Epic Story of the Brooklyn Bridge (1972).

HAYMARKET SQUARE RIOT:

A letter by Albert Parsons published in *The Alarm*, August 11, 1888, after Parsons had already been executed. Parsons was from an old New England family. He and his wife Lucy moved to Chicago where both became active in the labor movement, in socialist parties and in key anarchist groups. By the time of the Haymarket incident, Parsons was one of the best-known anarchist organizers in Chicago.

"There is no evidence that I or any of us killed, or had anything to do with the killing of, policemen at the Haymarket. None at all. But it was proven clearly that we were all of us anarchists, socialists, communists, Knights of Labor, unionists. It was proven that three of us were editors of labor papers; that five of us were labor organizers and speakers at workingmen's mass meetings. They, this class court, jury, law and verdict, have decided that we must be put to death because, as they say, we are "leaders" of men who denounce and battle against oppression, slaveries, robbery and influences of monopolists. Of these crimes against the capitalist class they found us guilty beyond any reasonable doubt, and, so finding, they have sentenced us."

Carl Sandburg, *Always the Young Strangers* (New York: Harcourt, Brace & Co., 1952), pp. 132-33. Sandburg was not himself an anarchist at any time. In this passage, he recalls from a distance of many years the mood in Chicago in 1886.

“Then came the murder trial of the eight men and we saw in the Chicago papers black-and-white drawings of their faces and they looked exactly like what we expected, hard, mean, slimy faces. We saw pictures of the twelve men on the jury and they looked like what we expected, nice, honest, decent faces. We learned the word for the men on trial, anarchists, and they hated the rich and called policemen ‘bloodhounds.’ They were not regular people and they didn’t belong to the human race, for they seemed more like slimy animals who prowl, sneak, and kill in the dark. This I believed along with millions of other people reading and talking about the trial.”