

# From Birth to Death at the Pan-American Exposition

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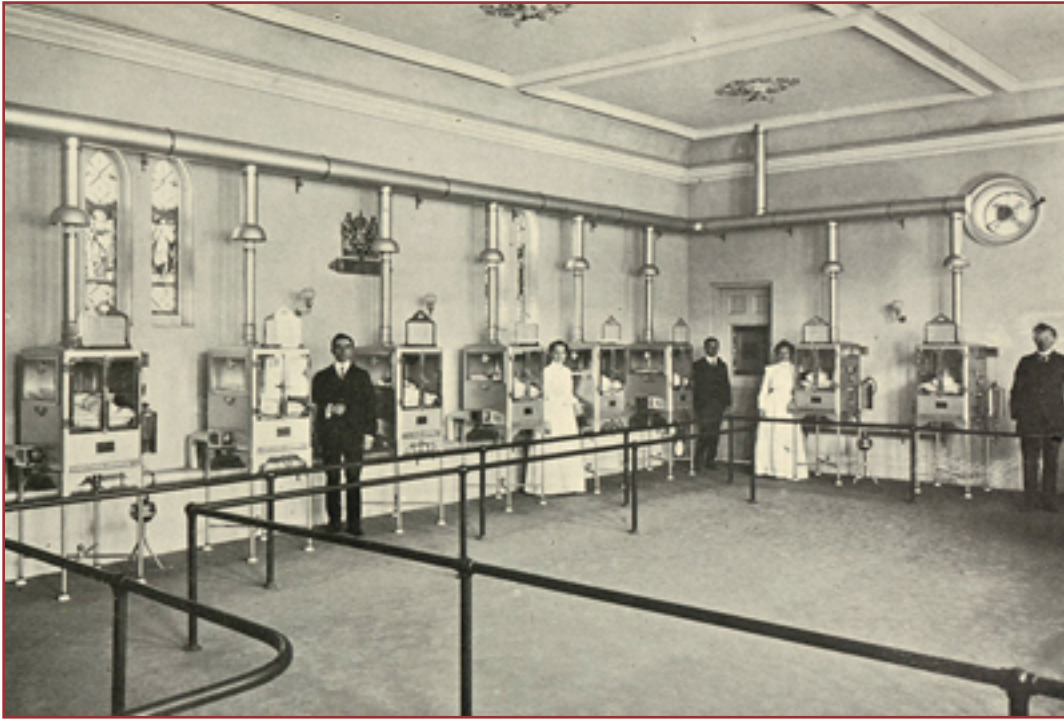
## Baby Incubator Exhibit at the Pan-American Exposition in Buffalo

As with other attractions at a fair, a hawker tried to entice people into the "premie" exhibit located in a "neat and artistic" brick building.



The hawker at the Buffalo Pan-Am enticed customers by telling them this exhibit provided hints to mothers and females for the successful rearing of weakly infants. An [article from the 1901 edition of](#)

*Pediatrics* stated that the Lion incubators used at this exhibition were made of metal and glass, which allowed for quick and easy cleaning and sterilization.



Each infant was swaddled; a card above each incubator recorded the occupant's initials, date of birth, date of admission to the incubator and other details. The heat in the incubator varied plus or minus 2 degrees Fahrenheit. Fresh outdoor air for the incubator was filtered and warmed before it reached the infant. The babies were fed and cleaned every 2 hours,

whether it was day or night. It was claimed in an article from *Scientific American*, August 3, 1901 that incubators saved 85 percent of the "premies" and weaklings.

In another article from *Cosmopolitan*, (September, 1901) Arthur Brisbane compares the baby incubators to the wonders of Niagara Falls.

## Incubator Beginnings

The first attempt to construct an infant incubator on scientific principles was made in France in 1878. Although incubators had been patented in Paris by the early 1890s, U.S. physician Edward J. Brown, M.D., having no guidelines or descriptive plans, devised an incubator of his own to save a premature infant born in 1891.

## Incubator Exhibit in the News

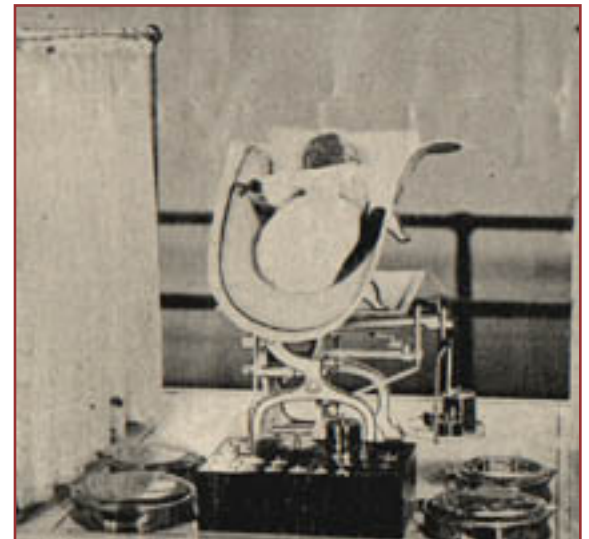
The incubator exhibit received serious attention from *Scientific American*, which called it a model nursery. The baby incubator exhibit was in the news for other reasons as well. On July 20, 1901, the *Buffalo News* reported that a baby had been prematurely born to Apache Indian Princess Ikishupaw and Chief Many Tales. Dr. Couney was called to the Indian Pavilion and had the infant placed in an exhibit incubator. The *News* reported that at 2 pounds, 2 ounces, it was the smallest baby ever born. On November 7, 1901, The *New York Times* reported a different type of incident



regarding the Baby Incubator Exhibit. According to the article, Couney and his partner did not pay the proceeds agreed upon to exhibit infant incubators at the Pan-American Exposition in Buffalo. A judge had ordered them to pay their share which came to \$31,250 and to also pay \$75,000 in damages for repudiating a similar agreement for the division of the gross receipts of the incubator show at the coming St. Louis Exposition.

## After-Effects of the Baby Incubator Exhibit

The Children's Hospital of Buffalo purchased the Lion incubators after the exposition ended. Afterwards, Couney went on to have a summer baby incubator exhibit for the next forty years at Coney Island. Couney felt parents did not appreciate the work he was doing for their premature and weak infants. When it was time to send a healthy infant home, it was difficult to convince the parents to take their infant. A pediatrician named Dr. Zahorsky, who oversaw an infant incubator exhibit, did note the effect of hospitalization on both the infant and the parents. We now know that it is not in the baby's best interest to be separated from its parents; neither is it in the parents' best interest.



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## The Infant Incubator Building

Photo credit: C. D. Arnold

Source: *The Pan-American Exposition Illustrated* (Buffalo, N.Y.: C. D. Arnold, 1901)



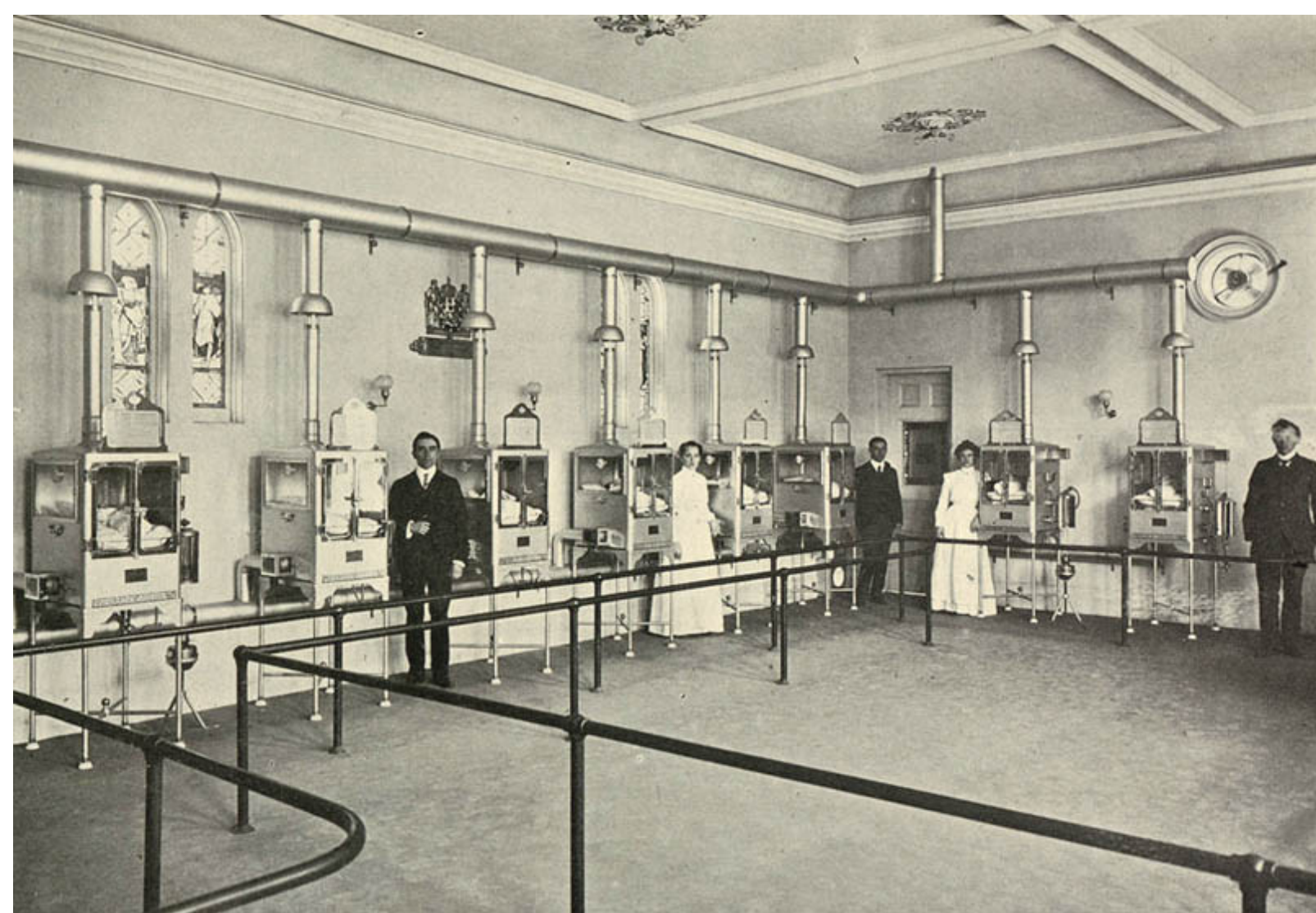
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## Infant Incubator Ward

Photo credit: C. D. Arnold

Source: *The Pan-American Exposition Illustrated* (Buffalo, N.Y.: C. D. Arnold, 1901), p. 101.



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## Model Nursery

Photo credit: n/a

Source: "Baby Incubators at the Pan-American Exposition." *Scientific American*, (August 3, 1901) p. 68.



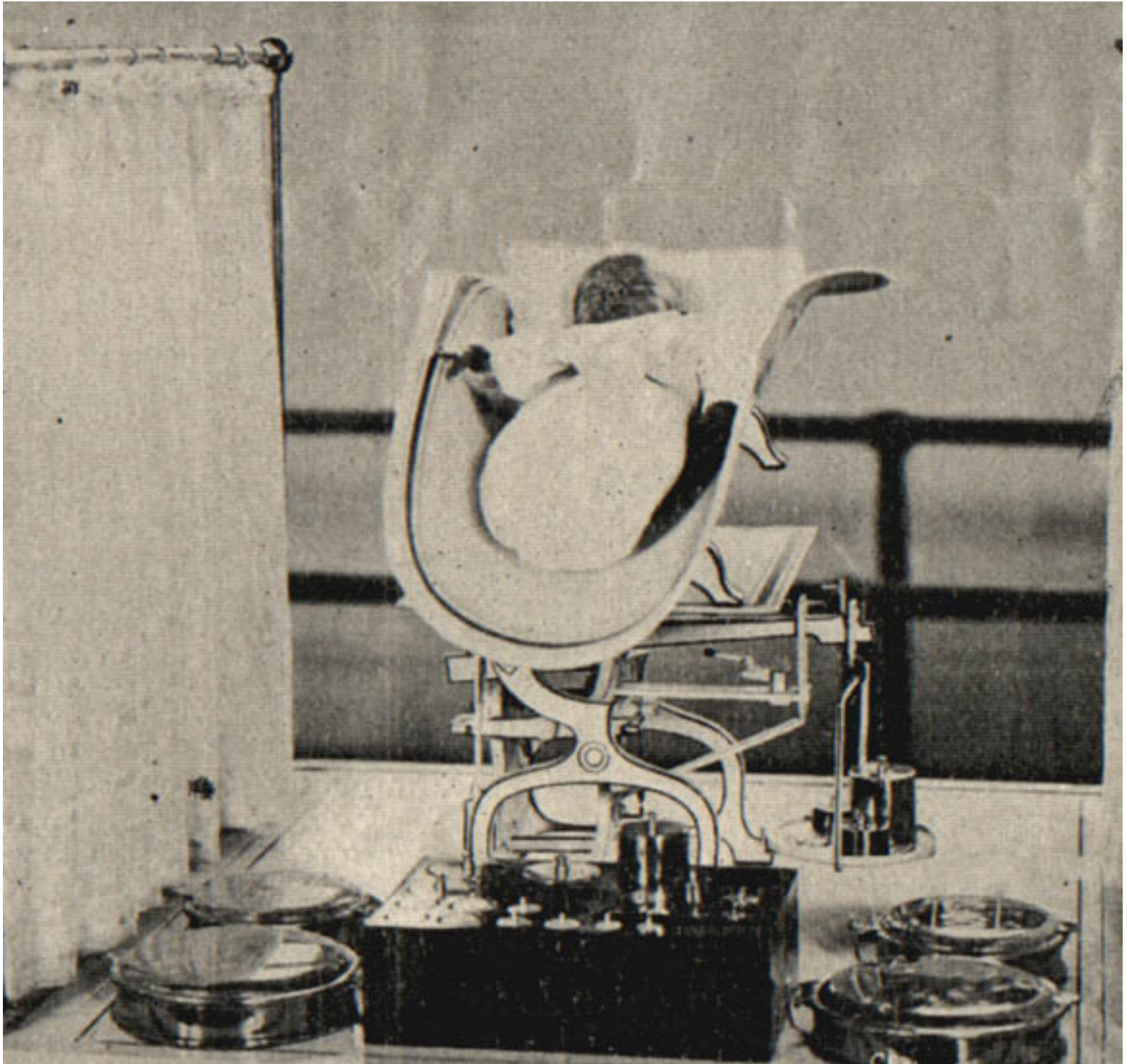
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# Weighing an Infant

Photo credit: n/a

Source: "Baby Incubators at the Pan-American Exposition." *Scientific American*, (August 3, 1901) p. 68.



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## The Incubator Baby and Niagara Falls \*

By Arthur Brisbane

[This article appeared in *Cosmopolitan*, vol. 31, no. 5 (September 1901), pp. 509-516.]

**M**en go to the Exposition at Buffalo to see and to think.

Two features of the Exposition well worth seeing and thinking about are chosen for discussion here:

Two vast extremes.

The weakest and the most powerful manifestation of nature's power.

The falls of Niagara, with the great system of lakes and rivers behind them.

The diminutive baby in its hot-air chamber, sightless, deaf, feeble-but with the great human race, the vast sea of organized thought, back of it.

All the world reveres the power and beauty of the falls. Men stand in the spray on the high banks, as the rainbows form and the green water sweeps over with millions of horse-power. Eighteen million cubic feet of water every minute, dashing down to carve out the solid rock. There is power marvelously manifested.

But what is that power beside the force that may originate in the tiny brain of an incubator baby?

The brain is smaller now than half of an apple. But that brain may start a work that will persist, and affect men's destiny, when the falls, working their own ruin, shall have dwindled down to an even, placid stream without so much as a ruffling of the water to tell where once the great power rushed by.

**L**ook at the falls and look at the baby.

A mighty river flows swiftly and quietly until suddenly it drops into space over a ledge of solid rock

one hundred and sixty-four feet high. There is dull thunder in the air, a roaring that has not ceased for ages upon ages. The mind cannot conceive the force of that torrent. Like so many chips it would wash away every vestige of the great Exposition and every building in the city of Buffalo.

But, if you will see it, there is more to interest in the little form behind the incubator glass than in all the roaring and power of "the Thunder of Waters."

The difference between the force of the Niagara River and that of the newborn baby is this: One, the river, represents material force, the mere force of gravity. The child's brain represents spiritual force, the power of organization and of speculation. The power sent here in fragile human forms to rule the falls, and other manifestations of crude power, regulate nature and do the work of embellishing and cultivating the globe.

Have you ever seen a baby in an incubator? Look at one now.

Through a thick plate of glass you see a tiny form arrayed in spotless linen. Blue ribbons indicate elbows and knees. The tiny human being lies on a soft cushion, under its head a pillow as big as a man's hand. It is pathetically short and mysteriously still. The head is small, the face pink and tranquil, with the solemn tranquillity of peaceful old age. The hands are so small that a beetle might almost wear them for claws. They are gently closed. The baby is supremely happy and comfortable, with the happiness that knows no want, feels and craves nothing. That incubator baby begins earthly life in the blissful state of Nirvana, for which the Buddhist struggles through existence.

The typical American mind, ever suspicious, watches the little creature with growing doubt. Is it a real baby, or a wax one put there to deceive the public? The nose, in size and shape like a small huckleberry, gives faint promise of future character. It draws in the heated air so softly that breathing is invisible. Perhaps long watching shows the waxen fingers open and close, very slowly. That means that a revolution is approaching in that small human world. The baby wants to be fed, and soon you will realize that he is alive. His face is drawn into odd shapes. A feeble wrinkle, inherited from some ancient relative, appears above the eyes. The eyes are tightened into knots, the hands are jerked up over the stomach-sole seat of serious sensation-and a mewling sort of cry tells the watchful nurse that feeding-time has come.

He is moved from his nest of heated air, carefully wrapped in woolen coverings. He is weighed, fed as nature intended he should be fed, weighed again and put back to resume his interrupted, sleepy contemplation of the infinite. If he does not weigh enough, he is persuaded in various ways to absorb more nourishment. His life is regulated, and, unlike older mortals, he is contented that it should be regulated. Hot air, cleanliness, a soft bed and good food satisfy him.

Of all minds, a vast majority are more deeply impressed, of course, by the falls of Niagara than by any baby, however interestingly presented.



We are used to babies, and a majority of us see but little in them at best.

In Niagara Falls the human mind sees almost as many different interesting possibilities as there are different sorts of human beings.

The scientist looks at the great force going to waste. He says, "I'll harness it." And he does. His harness attached to the cataract now lights the distant city and drives machinery many miles away.

The adventurous creature with dull imagination sees only danger and a chance for possible personal achievement by taking the risk. He says, "I'll go over the falls myself." And he does go over in a barrel, to meet his death or to sit proudly in a dime museum the rest of his days.

The astronomer, looking at the earth as a tiny speck in space, sees in human admiration of the falls only interesting proof of our infinite human littleness. He wonders that any man should study Niagara Falls when he might study comets traveling hundreds of miles per second with streaming tails of fire millions of miles long.

The bride and groom, full to the brim with the little emotion which constitutes their world, see in Niagara Falls only a suitable background for a photograph. The groom slaps his chest and says, "Our love is as strong as the cataract." He forgets that, like the cataract, his love will recede, presumably.

The student of social problems finds suggestion and even ground for indignation in the study of the falls.

The earnest single-taxer knows that the government has been compelled to pay vast sums in order to establish national parks near the cataract. He knows that the falls are receding every year. It occurs to him that a speculative millionaire might buy up both banks of the Niagara River two miles above the falls and leave to his heirs absolute control of the cataract in the future. It maddens this single-taxer to think that this small investment now would enable the heirs of the plutocrat later on to own every foot of Niagara Falls real estate and compel the government to pay ruinous prices once more for park space.

There is theoretical logic in the single-taxer's views and in his anger. The cataract does recede. It recedes one foot every year on an average. If a man bought both sides of the river two miles above the falls, he would control all the cataract real estate in exactly ten thousand five hundred and sixty years from now. It would take that length of time for the cataract to move back two miles, so that the plutocrat's heirs would need to be very patient and pay taxes for a long time. Incidentally, by the time it shall have receded two miles the cataract will, according to scientists, be reduced in height to eighty feet and will hardly be worth seeing.

It is probable that in that distant day the troubles of the single-taxer will have been adjusted even to his satisfaction, as a natural process of civilization. It is certain that at that time men will read with amusement of the primitive days when their fellows harnessed up a petty waterfall in order to move

their engines.

In that far-off time the problem of conveying the strength of a waterfall a few miles away will appear as childish as the invention of the wheelbarrow seems to us now. Tides will long since have been harnessed. The brains then living on this big driving-wheel called the Earth will have learned to utilize the forces in the great machine on which they revolve daily.

Intellects are now struggling with the problem of abstracting electric force from coal direct. They will then be thinking of the problem of utilizing direct the sun's energy, or the power of gravity in our satellite donkey-engine, the moon.

But this has led us from our small, tiny-faced friends in the rows of incubators.

**A**ll kinds of little human dynamos lie in those hot-air boxes.

One with a few spears of red hair and a very determined expression at feeding-time is of pure Irish stock. If his emotions could be translated into coherent speech, he would undoubtedly express a desire to challenge any baby of his weight in Incubator Row. The nurses declare that he tries to fight them, although he weighs less than five pounds.

Another, of whom, perhaps, more later, is of German blood. In spite of his youth, he is distinctly philosophical. It is easy to imagine that he devotes hours of speculation to a nearby shed in the Exposition where scientists are experimenting with different breeds of cows, testing their good qualities with various kinds of food, and especially their availability for nourishing motherless infants.

Side by side are three little creatures whose relationship is recognized at a glance. These are the Cohen triplets, taken by their careful father and mother to the home where the best chance for development will be given them.

Possibly you would envy the man who would own the falls of Niagara. But you would envy much more wisely him who shall possess for his own the possibilities of development wrapped up in those little Cohen triplets. You would possess the possibility of wealth beyond the dreams of avarice, as Doctor Johnson prophetically said when auctioning off the Bass' ale brewery. And you would possess, also, possibilities of power, intellectual and artistic, beyond the dreams of human ambition.

One triplet with the right start, education and incentive might give you the wealth of a Rothschild and enable you to buy, without feeling the outlay, all the power of the falls and the land for miles around. Another might give you the genius of a Heine or the admirable moral purpose of a Spinoza, more desirable than all the money that all the Rothachilds ever dreamed of. The third might contribute to your powers and to the world a Hersehel in astronomy, a Mendelssohn in music, or a genius like that of Bernhardt in the art of interpreting genius.



Those three little creatures lie in their nests of warm air, quiet and dull, waiting for the feeding-hour. They are frail, insignificant little atoms compared with the great torrent that roars and rocks the ground a few miles away from them. But any one of those three small heads might develop a force far superior to that of many Niagaras.

When you go to the Exposition at Buffalo, you are sure to visit the falls without advising. Be advised here to devote to the babies in their incubator at least as much thought, if not as much time, as to the giant waterfall. In the evening, when you come out of the incubator building, you will find the Exposition lighted with wonderful effect by the invisible power generated at the falls and brought through wires to the little glass bulbs.

Towers of light, avenues of light, arches and fountains of light, dazzle you with their glitter and glare. Nothing, you think, could be more impressive-until you look above and see, afar off in the dark, one single star that makes all the lighting of that little corner of the earth seem like the flickering of a few fireflies fluttering about in the face of eternity.

The power of Niagara lights those lamps and floods the Exposition with brilliancy. But in the brain of an infant is born the power that lights civilization, that lights the path of men on their journey toward a decent social order.

We can measure and limit the power that thunders at Niagara. We know that it is indestructible; that we may at will utilize it as heat, motion, light, electricity. But who can measure or limit, or understand the power that is in the human brain? That power also is indestructible. It bestows immortality on all who think. It involves the marvelous combination of comparison, observation, induction, deduction. It is the force that rules the world, studies and gradually understands the universe.

Of that wonderful power of thought the seed is planted in every infant brain. And for that reason the incubator baby, silent, unimpressive, insignificant apparently, deserves to rank in importance with the falls of Niagara when nature's wonders are studied intelligently.

### **P.S.-A LESSON FOR MOTHERS**

**T**he baby in the incubator is born into a world of trials and troubles before his appointed time. For that reason science provides for him in the incubator a home as like as possible in temperature and other conditions to that which he has hurriedly abandoned.

One incubator baby of German parentage was studied by this writer. There is a lesson for mothers in that German baby, as there is in every incubator baby, amid it shall be told.

The German baby hurried into the world almost three months ahead of time. He weighed three pounds,

and doubled his weight in six weeks. His heart was about as big as the end of your thumb, and his liver-as in all newborn babies-was monstrously large, nearly as big as that of a child of ten. If you want to admire nature's wisdom, study the newborn baby's liver, with its changed position in the body and its wonderful adaptation to a milk diet.

That little German infant, like all babies born too soon, presented an aspect of extreme old age. It was one mass of wrinkles all over its body. Nature does not waste effort. The baby unborn has no need of adipose tissue, and the tissues of the body, intended to act as cushions, protecting us from the outside material world, are provided only just before birth.

He arrived quite bald, toothless of course, with wrinkled skin and an aspect of unbelievable solemnity. No man one hundred and twenty-five years of age ever appeared one-half as ancient.

## **HERE IS THE LESSON FOR MOTHERS**

**T**he baby did so well at the end of six weeks that its mother insisted on removing it from the artificial nest. It was well cared for by a mother of at least average intelligence. But it failed rapidly, and would have died soon had it not been put back in its shelter.

It suffered, not merely through irregularities of temperature, but through brain fatigue.

Mothers would do well to remember that the chief thing in caring for a baby is to keep its brain quiet. An agitated infantile brain exhausts the blood-supply, takes heat from the stomach, where it should be, to the brain, where it does harm, and kills off millions of children. This particular baby was not agitated mentally by the usual processes of forcing intelligence. He paid attention to nobody.

But removed from his incubator his brain was forced to work, in order to regulate temperature. Every human brain contains among its millions of distinct parts a mechanism which devotes its energies to dealing with conditions of heat and cold. This thermotic apparatus causes closing of the pores, when sudden cold strikes the body, and regulates in other ways our physical ability to undergo changes of temperature. So, at least, said the wise doctor that cared for the German baby. This feeble effort of one tiny brain function was sufficient to diminish the baby's vitality and menace his life.

Mothers blessed with healthy children normally born should learn from the German baby's narrow escape to let their children's minds rest as long as possible, while the body gets its start. Nature sets the example by making the baby deaf for a long time after birth. Mothers and nurses often do not know even this.

To-day the German baby is doing well. It is as heavy as its competitors on the block and will live to do its share of the world's hard work. It will do infinite good, should the story of its advent here below impress upon mothers the fact that building up the baby's body involves keeping its brain quiet.



**\* MY DEAR MR. WALKER:**

To describe adequately the Exposition at Buffalo would mean to review the history of the world in general and the development of this continent in particular.

A preliminary feature of such a task would be a description of this land's transition from a home of many bison and a few savages, to a nation of many savages and a little preliminary civilization.

According to Professor Blackie, we should "think" through a book. This well may be applied to a national exposition. He who will THINK his way through the Exposition at Buffalo, or even part way through, must find something interesting to tell, though he describe but a fragment of the splendid edifice.

I have selected two extreme features for discussion. I hope the bringing together of natural phenomena as widely divergent as the falls of Niagara and an incubator baby will interest some of your readers-and that shall not entirely waste the space that you are good enough to offer me.

Yours very truly, ARTHUR BRISBANE.

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