

A Million Dollar Baby in an Incubator. Just What Money and Science Are Doing to Keep Life in the Midget Granddaughter of Philip Armour, of Chicago.

A millionaire baby, the only granddaughter of Philip Armour, the Chicago pork packer, is living in a little world of its own, quite cut off from the rest of humanity. The tiny girl was born before she was quite sturdy enough to breathe the air that mortals breathe and she was at once put into a "brooder," or incubator, as it is commonly called. If the doctors succeed in making her live old Phil will give the midget \$1,000,000 when she is able to take her out of the machine.

When John Howard, a hundred years ago, told the world that in a Wallachian prison he had seen men kept in cells only four feet high and six feet long and two feet wide women fainting with horror at the philanthropist's description of the living death to which these wretched creatures were condemned. But the sky of Miss Armour's world is only twelve inches above her head and from one horizon to the other the space is only two feet, and yet the young lady does not find her sphere of action limited, for the only movement she makes is to wiggle her pink toes and open and shut her microscopic fists.

When a chicken first comes out of the shell it hides under the wing of the brooding hen, weakly nestled against the mother, breathing an atmosphere tempered by passage through the close-set barbs of the plumes. In the mechanical brooder in which the Armour baby may have to spend several months the air is sifted through layers of cotton-wool and then cleansed is supplied with an added proportion of oxygen from a tank attached to the apparatus before being warmed and fanned into the tiny cell.

The temperature inside the brooder is kept at 95 degrees Fahrenheit so that no part of the child's strength need be wasted in the generation of animal heat. Warmth, darkness and silence are the three chief characteristics of a child's environment before it is born and the use of the brooder makes it easy to exclude both the light and the noise, which disturb the incomplete human being.

Another requirement is that the delicate morsel of humanity should be touched and handled as little as possible. If it were possible to keep it floating in a bath all the time so that there would never be unequal pressure on its body, this would be done, but it is not practicable to do more than provide the softest of beds. As it is necessary to change its position from hour to hour, the mattress on the brooder is supported by a scale which can at any instant be observed by the nurse without disturbing the baby.

A special form of stethoscope, fitted with an India rubber cap and made of such small calibre that it can be easily introduced between the ribs of the smallest child, is fitted into the roof of the brooder and the attendant physician is thus enabled to detect the earliest symptoms of derangement in the chest.

Miss Armour's wardrobe at present consists of nothing but absorbent cotton, in which she is carefully wrapped, and this is changed so often that she does not miss the bath which she is not yet strong enough to take.

Her nutrition, too, is a complicated task. The old system of "gavage," which was to stuff food down the throat of a child too weak to eat, just as meal is stuffed down the throats of chickens which are being fattened for the market, proved unsatisfactory for the baby made an involuntary effort to struggle against this process of stuffing, and every effort involves fatigue where fatigue is to be most rigorously avoided.

A little glass cylinder was then arranged so that it would hold half a dozen ounces of milk, and at the ends of the cylinder two rubber bulbs were placed one of which was perforated.

From this tiny exit the milk is slowly forced down the child's throat, a drop at a time. A spoonful of milk is given every hour throughout the twenty-four hours of each of the first few days of life, and the weight of the little girl, which was four pounds four ounces when she was born, has not yet decreased at all. This, in itself, is considered a great success, and it will not be until the fourteenth or fifteenth day of her life that any increase will be expected.

When she is a month old, she will, if all goes well, weigh about eight ounces more. At five weeks of age her weight ought to be five pounds, at seven weeks six pounds, and at ten weeks she will probably weigh seven pounds, and be removed from the brooder. Throughout this time she will have four or five drops of brandy half a dozen times on any day when she seems to be losing strength.

The milk upon which she is fed is in itself an extraordinary product of the chemist's skill. When a child is especially delicate the quality of the milk upon which it is fed has to be changed every day, and sometimes even every hour. The proportion of fat, of sugar, of proteids, not only varies greatly in the case of milk from different cows, but varies also in the milk of the same cow. One day a cow will feed at a part of the pasture in which the grass is of such a quality as to put more or less fat into her milk than would be produced by the grass only a few yards away. In the same way human milk varies from hour to hour, according to the food taken by the mother, the condition of her general health, and the amount and nature of the exercise she takes. It cannot, of course, be expected that these variations in the constituents of natural milk should coincide with the variations for the best possible nourishment of a feeble child.

The artificially modified milk is prepared by a sequence of chemical processes, the first of which is sterilization. When this has been accomplished, the milk is cooled and its respective proportions of fat, sugar and proteids ascertained. These proportions vary so greatly that in an assortment of a hundred tubs of natural milk, there

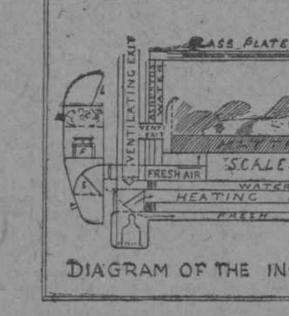
will be found samples in which the percentage of fat is as low as 0.03 or as high as 4.5. The percentage of sugar will be seen also to range from 0.87 to 20, while there may be from 0.22 to 4.9 of proteids. These various sorts of natural milk can easily be arranged and altered that the attending physician may write a prescription for any quality of milk he wants.

At first sight it seems hard to believe that a child whose health is in so unstable an equilibrium that a brooder is advisable, should be as well nourished by another food as it would be if it received the nutriment provided for it by nature. It is, however, to be remembered in this connection that human milk is liable not only to changes which may be explained by the merely physical conditions of the mother, but also to the swiftly succeeding alterations occasioned by the nervous excitability, which is so much greater in the case of a human being than in the case of any other mammal and which is especially great during the few weeks succeeding the birth of a child.

Dr. Koch, of Harvard University, whose experiments and researches have done so much for the study of scientific lactation, finds that the chemistry of equine and lack of equine of the mammary product is very closely connected with the proteid element. It has repeatedly been found that seasons of fasting with their accompanying excitement of the emotions so deranged the equilibrium of the milk that the proportion of fat has run down to 0.88 per cent with an immediate result of the loss of weight on the part of the infant.

Not is it the opinion of Dr. Koch and of careful observers that human milk is more sure to be devoid of bacteria than the milk of a cow. The internal organism of a child which is delicate enough to need enclosure in a "brooder" must certainly be ill adapted to struggle against bacteria. This is another reason which counts very strongly for the increased favor with which physicians regard the employment of artificially combined and prepared milk. A great many experiments have been made with the milk of the ass and the mare, but although there is every reason to suppose that their milk might change in its composition if these animals were generation after generation bred exclusively with a view to their employment in the dairy, they are not at the present time important factors in the problem of finding the best

possible food for children who need such care as does the little Armour baby.



L shows the open lid of box which the fresh air enters at A, passing through loose cotton, C, and turning downward to the clockwork fan, F, passes through valve, S, and receives additional oxygen from the pipe, O, is heated as it passes both above and below the cylinder of hot water and is passed in over the child's head.

It is interesting in this connection, to observe that in the ancient Assyrian sculpture cows are represented with udders so slightly developed as to make it quite evident that they were at one time regarded as producers of meat rather than producers of milk. When as much attention has been paid to producing milk mares and milch asses as has been given to the development of the milch cow, it may very well happen that the sort of food which is being given to the Chicago baby at the rate of a spoonful an hour will be obtainable at the cost of very much less manipulation and modification than are now involved.

The Armour baby was on the first day fed with a modified milk, of which the proportion of fat was 1 per cent, sugar 3 per cent and proteids one-half of 1 per cent, and to which 5 per cent of lime water was added. The proportion of sugar has been increased from day to day, and the milk enriched by a somewhat slighter increase of the proportions of both fat and proteids.

Each indication given by the condition of the delicate stomach is thus immediately followed by the change in the composition of its food which seems to be called for. As a rule the clearest indication is afforded by the readings of the scale, which show the minute alterations in the little girl's weight from each morning until each afternoon.

The temperature of the "brooder" will be decreased from day to day. It has already been brought down to 83 degrees, and although during the three weeks it may probably be necessary to raise it again to 87 or 88, it is hoped that at the sixth week, when a little light will be for the first time admitted, the temperature can be brought down to 78. Seventy-five ought to be reached about the seventh week, and at the tenth week the "brooder" will be heated to a temperature of only 70 degrees, no more than that of the well-warmed room of the nursery to which Miss Armour will emerge from the little world of her own, in which she is at present experimenting and trying to make up her mind whether the larger world looks like an agreeable sort of a place.

At the New York Nursery and Children's Hospital, Lexington avenue and Fifty-first street, "incubators" are in daily use, and although the babies who inhabit them from time to time are not millionaire babies, Dr. Evans and the nurses take as much care of them as if they were.

THE INSECT GRAVEDIGGER. A Wonderful Fly That Buries Its Victim Alive and Seals Up Its Tomb.

No more horrible form of execution has ever been devised than that of burying alive. It has been regarded as the most devilish device of which the mind conceived in the very darkest ages of cruelty. Yet the same act is perpetrated perhaps thousands of times in a single Summer in the sunny corners of Long Island.

The barbaric executioner is that strange

face jobs, back came the fly, sailing close to the ground, while trailing from her strong fore feet was a fat, juicy caterpillar. The caterpillar was dropped quite close to the hole, and then we knew that the miner was also a sexton and that the shaft was also a grave.

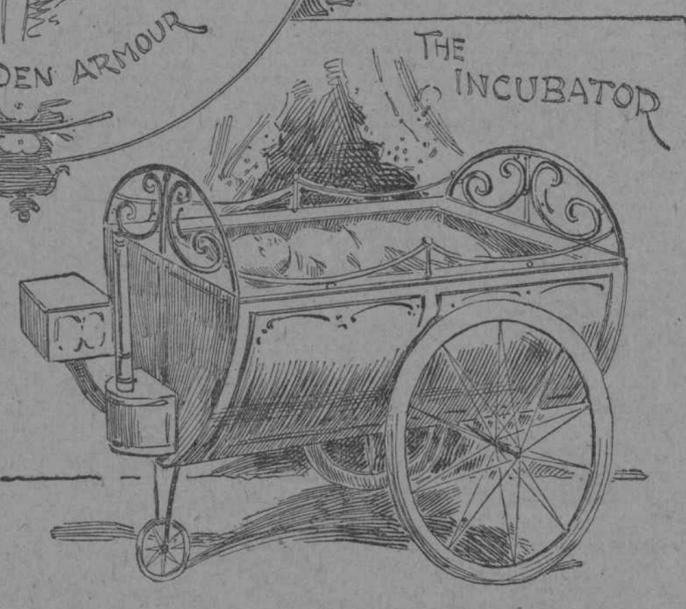
Then the ichneumon fly straddled the worm and drove her ovipositor deep into its back; the victim writhed into a loop, but soon stretched out still again. The ichneumon fly, it seems, injects a poison into her victim, which has the effect of partially paralyzing it, or possibly of embalming it, and it was this operation that had been conducted here. It was clear at any rate that the caterpillar was not dead, and that we were to witness a further horror, and that the fly was about to bury her victim alive.

By pulls and pushes the caterpillar was brought to the brink of the grave, and then shoved and rammed down into it. When the last tip of the caterpillar had disappeared, the fly "noosed around" among the debris until she came to a small flat gravel, about the size of a silver five-cent piece. This she seized between those strong fore feet of hers and carried to the mouth of the tomb. There she fitted it as a covering slab with much care and labor.

THE LITTLE ARMOUR BABY'S INCUBATOR AND ITS MOTHER.



MRS. OGDEN ARMOUR



THE INCUBATOR

hunting, thieving, merciless insect—the ichneumon fly. It was chance that made me a spectator of one of these medieval horrors of insect life, and this is what took place:

A bare spot where the gravel sidewalk had been trodden in was the scene of operations, and the sapper and miner was a long, slim insect of dark green color, with a large head and with a waist of exaggerated length and thinness. I had heard and read of the astonishing methods adopted by ichneumon flies in providing for their young, and now I was to study them.

She had dug a hole deep enough to conceal half of her body, notwithstanding the path was a hard as concrete. Possibly it was because of the very unyielding character of the ground that Miss Ichneumon had selected it. For, being so hard, it would not be likely to give way and so destroy her work.

Her manner of digging was that of a terrier, with variations. None of her body was above ground except part of her ladyship's Queen Anne waist and her waspish abdomen. The latter was cocked into the air and a little shower of dirt flew out from under it. This was the terrier-like part of the performance, and was repeated two or three times, the ejection of each shower being followed by the further disappearance of the fly. Then there was a backward wriggle, or rather vibration of the abdomen, the gradual evolution of a pair of working legs, then of another pair and then of a third, and between these last was a small stone with which the insect flew off a pace or two and then dropped it. Then, in a dash, back to work again.

For fully twenty-five minutes this mining went on, until the shaft was deep enough to conceal the entire body of the worker. Now leaving the free use of her legs, sometimes a small stone would be passed backward to the posterior pair, and the fly would emerge far enough to drop the stone beyond the hole. Whenever a large one was met with, however, the fly brought it out between her fore feet.

Two or three times she "came to grass," as the Cornish miners say, and busied herself leveling off the dump piles and casting away the little stones that had fallen at the pit's mouth. After one of these sur-

ELECTRIC EYES FOR SURGEONS. For Delicate Operations Requiring the Keenest Eyesight and Care.

The latest adjunct which science gives to the surgical operator is an electric eye. Strictly speaking, it is not an eye at all, but rather a sort of searchlight which is used to aid the human eye in delicate surgical operations.

Often times surgeons are handicapped in their work by the fact that they cannot see distinctly the parts upon which they must operate. The formation of the human body is such that in many instances no light can be put directly upon the particular por-

The most alarming claim made by these experts in pigments and gland coloring is that New York city is the spot where the falling off of the blonde is the most noticeable. While the decline of the blonde type is readily seen in England, Ireland and Germany, they claim that in New York and along the Atlantic and Gulf seaboard the decrease is so rapid as to give cause for wonder as to the reasons which lead to this change of type.

One afternoon last week a Journal reporter stood among the throng of women which is always to be found in a fashionable confectioner's upon upper Broadway. Particular attention was paid to the complexions and hair of the feminine purchasers of sweets and soda water, with the following result:

Within fifteen minutes seventy women passed in and out of the place, their ages varying from fifteen to fifty. It is interesting to note that not one of them was gray, although in a few cases there were unmistakable evidences of false coloring.

Of the seventy, only two were natural blondes of the golden haired type, although there were a dozen women and girls with the lightish brown hair and medium complexion which some call blonde.

There were seven women of the peroxide or bleached variety, some of them so skillfully "touched up" as to defy detection except on close observation, which

showed darker coloring at the roots of the hair. There were four auburn haired women, and the rest of the seventy were all women with hair black or brown, in shades varying from golden brown and red brown to that deep brown which looks almost black.

This would seem to carry out the theory of the new school of color students. A percentage of two to seventy is quite small enough to uphold the idea that we are becoming a race of dark-haired people.

I asked Dr. Irwin, the personal physician of Viceroy Li Hung Chang, what was his opinion on the subject of blondes and brunettes. Dr. Irwin is a deep thinker and a student. He is not only the great Chinaman's physician, but his friend, and has dressed many of his wounds upon the battle field and that made by the Japanese assassin's bullet, which ploughed across the Viceroy's face, leaving a scar which is still noticeable, and which came near ending his life.

"In the East, where I have lived for many years now, we have no blondes, or so few that a blond baby in a Chinese family is regarded with a wonder which places it almost among the supernatural in the regard of its parents and those who look upon it. In Spain a blond woman or a fair skinned woman is considered beautiful, no matter how plain featured she may be, so rare is the type.

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Will There Be No Blondes in the Twentieth Century? Blue Eyes and Fair Hair Fast Disappearing and at the Present Rate Will Soon Be Extinct Altogether.

Since time immemorial blue eyes and golden hair have formed the theme of poets and novelists, as indicative of beauty and gentleness of disposition. By many the blond beauty is thought to be the ideal feminine type.

Painters make all their angels and cherubs with golden hair, while the dark-browed Mephistophelian type of man or woman has always been the pictured type of sinister wickedness and evil. On the stage the ingenue's wig is always golden, while the adventuress sports locks of raven blackness.

And now some prophets who are always finding out unpleasant things, declare that the race of blondes is disappearing and dying from the face of the earth, and that, except in the extreme north countries of Europe, the blonde is fast becoming extinct. The end of the next century these statisticians claim will find a blond man or woman as rare in this part of the country as they are now in the East or in Spain.

Whether this shows a deterioration or an improvement in the human race is a disputed question among psychologists and students of temperament. The poetic qualities of the fair-haired man or woman have not been disputed, but the actual worth of the blonde as compared with the brunette is often debated, the opinion reached being usually in favor of the latter.

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dark-haired people, and perhaps the indication may be that we are growing stronger.

"I quite agree with Dr. Beddor, who has made a study of this subject, and who says that in the lower grade socially you find the dark skin and dark hair. At the same time, you find courage, physical strength and endurance which is wonderful in comparison with that of a blond people. Pigment gives the system superiority physically, and the black-haired workman is always stronger than his fair-haired fellow. Pigment takes the place of nitrogen and feeds and gives vigor to the system.

"One theory which has been advanced as a reason for the decrease of the blonde type is that the American people live in a constant nervous strain. The nerves live upon the pigment in white people. Where the blonde type decreases, I should say that the nerves were growing stronger and the powers of endurance and courage more, while spiritual and poetic qualities may be getting less."

Dr. W. J. O'Sullivan, who is a blonde himself, said that the dying out of the blonde race was a subject in which he had always been interested. "The Arabs," he said, "at one time had many light complexioned people among them, but at present this is not the case. The ancient Greeks and Romans were of light complexion, and some of the strongest men the world has ever known were the red blondes among the Romans."

"As to the superiority of brunettes, I cannot agree with you or with Dr. Irwin. The police records show a great majority of crooks among the dark-haired people. Take Thomas Byrne's book upon criminals and look through it. You will find only one blonde to about ten dark-haired men who are described among the burglars, murderers and bank robbers therein.

"A certain French doctor named Ferrier has made a study of this subject. He says that the statistics prove light haired people to be for more susceptible to disease than those of darker coloring. If this is so, it will be easily seen that a wise Providence ordains that the race of blondes should die out; but then this is an ot-disputed subject.

"I have been told that the records of the War Department for more than twenty-five years back show a remarkable increase in blondes. In 1863, I think it was, there were sixty-six out of every one hundred soldiers in the American army. In the German army seventy out of every hundred were blonde. There has been a falling off of nearly ten per cent since 1863 and 1896."

Mrs. Isabel Cassidy, whose Toilet Bazaar on Twenty-third street has a large patronage among the society women of this city, says that she has not noticed any falling off in blondes among her patrons. "I think," she said, "that it is all a matter of the gland coloring and of climate and temperament. There are quite as many light-haired women who come here as there are dark, and many of the latter are very beautiful, but I have never agreed with those who consider the blonde type the prettier of the two. I think the brunette has more character and dash to her in all cases. She wears, too, the delicate skin of a perfect blonde is something that requires constant care and attention. Age, dissipation, worry, everything of this sort, shows more plainly and quickly in the face and eyes of the blonde woman than in those of her dark-haired sister."

Another well-known New York complexion specialist said: "It is impossible to tell whether blondes are decreasing or not, because the preparations for coloring the hair have reached such a state of perfection now that it is impossible to tell the real blonde from the manufactured."

"I think that if blondes were not much rarer than brunettes there would not be so many women who choose to color their hair to golden. Then, you will usually find that men fall in love with blonde women much easier and oftener than they do with brunettes. I do not think that blonde women have the power to hold a man's affection, however, that a brown or black-haired woman has.

"It is surprising how many women on the stage and in opera will have beautiful brown or auburn hair changed to golden. I could mention five of the most prominent theatrical stars who are naturally dark-haired women, but who are known and admired everywhere as perfect types of blonde beauty. Then there are some who will bleach the hair for a while, and when they get tired of it will let it grow out in its natural color again."

KATE MASTERSON.

WOMAN'S TRADE SCHOOL. The Wage Earners' Club Has a Scheme for a Training School for Working Women.

Members of the Women's Conference of the Society for Ethical Culture, of which Professor Felix Adler is president, have recently formed themselves into a Women Wage Earners' Club. This club contains at present twenty-five members, all classes of working women being represented, from teachers, clerical workers, proprietors and forewomen of large manufacturing establishments to the humblest wage earner who can barely exist upon a weekly pittance. Many would-be members strongly objected to the name wage earners, but it was finally decided to keep it.

The objects of the club are to bring into social and intellectual relations those who, because of their daily work, cannot attend the sessions of the Women's Conference, which are always held in the afternoon. The club has in the coming season, and looks forward to accomplishing much material good by establishing a training school for working women similar to the trade schools for boys. No one can go among working women without realizing that the great need is for skilled help. The president of the club is Mrs. E. M. Tipton and the secretary is Miss Camille Solomon.