

AN INFANT INCUBATOR.

Whether the real interests of a race or people are better subserved by the preservation of its feeblest members is as much a matter of question, as whether it is the part of true humanity to prolong the days of a hopeless sufferer from an incurable, revolting, agonizing disease. A young and gentle mother develops cancer of the spinal cord after the very thorough removal of an affected mamma two or three years before, lies paralyzed in her lower extremities for many months, later has one thigh rigidly flexed upon the chest, suffers excruciating pain requiring heroic doses of morphia, is absolutely helpless, and repulsively unclean to herself and her family, and is only kept alive by the hypodermatic administration of brandy, while the disease progressively, but with appalling slowness involves the neighboring bones and flesh. Her doom is beyond human interference. Is it more merciful to cease to interfere and let nature end her frightful suffering, or to go on keeping the heart mechanically pumping and the sensorium acutely sensitive—a refinement of torture akin to that by which the victim of the rack or thumbscrew is kept alive to endure awhile longer? So shall the little pound or two of cold blue-black humanity prematurely ushered into the world, be coddled and nursed into an animate being, or shall the tiny spark be allowed to die out without effort to enliven it? Many intelligent men and women have lived, who would not had this been done. A prominent medical officer of the United States Navy used to attribute all his physical ailments to the fact that he had been cheated out of more than two months' intra-uterine preparation for battling with the outside world, and who, when born, was literally "put into a pint pot," yet he lived past middle-age, was well-deserving, respected and honored, but died insane. Whether these are only isolated instances which are counterbalanced by an excess of weakly survivors can not now be confirmed by statistical evidence, and until it is established that it is better to let the prematurely born die from inanition, the effort will continue to be made to keep alive these little waifs which have come before their time, and there is now in operation in the city of New York an establishment where this is being done under conditions that can hardly be improved.

At No. 2 West 18th St., in a building that could hardly be better adapted for its purpose had it been so designed, instead of as a summer-garden and dining-hall of the Hotel Logerot, there has been instituted within a few weeks a branch of the *Maternité Lion* at No. 26 Boulevard Poissonnière, Paris, itself an outcome of the *Œuvre Maternelle des Couveuses d'Enfants* established at Nice in 1891 by M. ALEXANDER LION, a philanthropist of that city, by whom the apparatus and its application were devised. The low birth-rate of France has stimulated efforts to save

every child born. From fifteen to thirty per centum of the annual birth-rate, according to place and local conditions, amounting to nearly 150,000, are born prematurely, and besides these 50,000 more which have reached full term are so feeble that they do not survive the earliest days of babyhood. To check this serious mortality French scientists have sought effective artificial means for the incubation of prematurely and weakly born infants. In 1857 Professor DENUCE of Bordeaux, produced the first incubator, and in 1880 Professor TERNIER, whose apparatus was improved by Dr. AUWARD and introduced at the Maternity Hospital in Paris, established the feasibility of saving infant lives by artificial incubation. The *couveuse* of M. LION, however, is the most satisfactory apparatus yet proposed, and since its installation at Nice in 1891 it has been awarded a silver medal in the Section of Medicine and Surgery at Lyons, 1894, the *grand prix* at numerous European expositions, and has received a first prize and gold medal at the Nashville Centennial.

The New York incubatory is a model of cleanness, neatness and elegance. The accessories of furniture and ornamentation are in admirable harmony with the beautiful little cages on three sides of the room in which nine mites of mortality were quietly sleeping, one of whom a week before was as cold, blue-black, and altogether unpromising a subject as could be imagined, requiring artificial respiration, but now with as assured a tenure of life as the other eight who were all seven months' children.

The incubator, which is supported on a metal stand, is essentially a metal box, with a glass front and side and within it, suspended by springs, a finely woven wire hammock containing a down mattress on which the baby lies in an atmosphere previously filtered, admitted through a three-inch metal pipe and discharged through a chimney of the same diameter surmounted by a fan indicating by its rotation the strength of the air current, which is warmed by means of a syphon through which water heated by a small cylindrical boiler at the right hand of the incubator, constantly circulates, the temperature being automatically regulated by a thermostat. A thermometer at the level of the infant's head is in sight through the glass door, through which the child is always visible.

It is important that the infant should be placed in the incubator immediately after birth. Every minute that it is exposed to the variations of external temperature diminishes its chance of life. The babies are fed by carefully selected wet nurses in an adjoining "nursing room" (*salle d'allaitement*), where every two hours they are taken from their cages, being first covered with a blanket, washed, cleansed and fed, and are then carried back to their little hammocks to sleep tranquilly another two hours in an atmosphere of unvarying temperature. A careful record is kept of the daily morning weight before feeding.

The official report of the physician inspector for the protection of children at Nice of the parent establishment at that city, which is conducted under the joint patronage of the municipality, the council general of the Departement des Alpes Maritimes and the ministry of the Interior of France, shows that "from October 29, 1861, to December 15, 1894, this institution has received 185 infants prematurely born, weighing from 1 $\frac{3}{4}$ pounds to 6 pounds 6 ounces; of these 133 left the institution healthy and in good condition (a proportion of 72 per centum), forty-eight died and four were still under treatment and were progressing favorably. The following tabular statement exhibits the relation of weight at birth to viability:

Weight at Birth.	No.	Survived.	Died.	Percentage Saved.
1 $\frac{3}{4}$ to 2 $\frac{1}{4}$ lbs	6		6*	
2 lbs. 3 $\frac{1}{4}$ oz. to 3 lbs. 5 oz	36	18	18	50
3 lbs. 5 $\frac{1}{4}$ oz. to 4 lbs. 7 oz	72	52	20	72
4 lbs. 7 $\frac{1}{4}$ oz. to 5 $\frac{1}{2}$ lbs.	54	49	5	90
5 $\frac{1}{2}$ lbs. to 6 lbs. 6 oz	14	14	0	100

*All died on day of birth.

Of sixty-two prematurely born infants received at the Paris maternity, fifty-one (eighty-two per centum) were successfully nurtured. Six of the eleven who died weighed less than two pounds, and their cases were almost hopeless. The others were brought in too late, having been thoroughly chilled.

Results so encouraging commend the system to a fair trial in our own country for the little unfortunates whose fault it was not that they have come too soon, but having been engendered have doubtless the same inherent right to live as their more robust brothers and sisters.

VACANCIES IN THE NAVY MEDICAL DEPARTMENT.

A subcommittee of the Parliamentary Bills Committee of the British Medical Association has made a report on the condition of the Army Medical Staff, the causes of its present inefficiency and insufficiency, and the reforms needful to improve it. Military as well as medical journals discuss the subject as one of the utmost importance to the army and to the country. Numerically the Army Medical Staff is at present eighty short of its authorized total of 891 officers; and the men who come up for examination to fill the vacancies are by no means of a high standard, professionally. In August last only twenty-two men presented themselves to "compete" for thirty-six vacancies; nineteen of them were accepted. Of the last batch who passed through the Army Medical School at Netley the man who stood highest on the list of Army Medical Staff graduates had lower marks than the last man of the list for the Indian Medical Service. It is well recognized by military men that the Army wants "the best stamp of medical men that the schools turn out"; but it is not obtaining them nor is it likely that it will obtain them until the status of medical

officers as to rank and title is so defined as to place them on an equality with other officers of the Army. At the present time they have cumbrous titles, such as BRIGADE SURGEON, LIEUTENANT-COLONEL SO AND SO; but they have no rank, neither real nor relative. They are satisfied with their pay and pension, but are discontented with their practically civilian status, which in camps and garrisons is no status whatever. There are other causes of discontent, such as the difficulty of obtaining leave of absence, always great but now impossible, on account of the depleted condition of the department and the frontier and plague service in India, which require the presence of every medical officer at his post of duty.

Our own Naval Medical Department has for a long time been suffering from a grievance somewhat similar in character, but not so aggravated, which is necessarily beginning to tell on the *sufficiency* of its membership. The department is at present 17 short of its authorized total of 170 officers; but the pressure of want is not yet so great as to suggest the lowering of the standard for entrance. The *efficiency* of the membership has not therefore been impaired. Naval medical officers are satisfied with their pay, but dissatisfied with their position. The young medical man ranks as an ensign for the first three years of his service, a lower grade than is offered to the passed candidate in the Army; and although the law provides for his promotion to a passed-assistant surgency with the rank of junior lieutenant, a certain clause of it deprives him of this rank until all line officers who antedated his entry into the service have attained it; and again when he is a surgeon in his own corps his relative rank continues to be that of lieutenant until all the line officers aforesaid have become lieutenant commanders. There are some other grievances, but those affecting rank and status are the chief. The engineers of the Navy suffer from a similar injustice, but a board of officers has recently been appointed by the Secretary of the Navy to formulate a plan which will be satisfactory alike to the engineers and the officers of the Line. Should this, as now seems likely, be effected it will only be a question of time before the injustice affecting the Medical Department will be met and recognized and remedied. Our Navy is now at the beginning of a new era in its existence. The construction of new and powerful ships is progressing rapidly and the personnel must in time be increased to meet the necessities of modern service. The members of the Medical Department will no doubt have many opportunities to distinguish themselves and their service in the future history of our new battle ships. On this account and notwithstanding the discontent among naval medical officers, it seems that now is a favorable time for young graduates of medicine possessing the necessary qualifications to enter the service. The next candi-