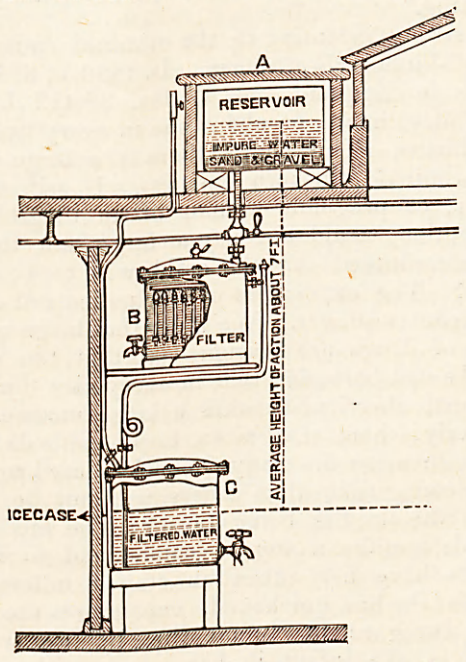
down with screws, so no one can tamper with the candles inside; and a special tap is also provided so that at any time the water in the reservoir can be cut off from the filters.



By having the filtered water receptacle made with a double casing, the water can be kept cold in the hot season by filling the intervening space with ice, which would be especially convenient in hospitals; and in the iron reservoir tank for the unfiltered water there is no reason why a layer of fine gravel and sand should not cover the bottom, to stop all the grosser particles from reaching the candles and fouling them; this sand could easily be washed and renewed from time to time, just as is done in ordinary filter beds.

As the Secretary of State for India is sending out six sets of each apparatus for trial in this country, it will be seen how simple the apparatus is and how easily the candles can be fitted in any desired way to suit all circumstances. Any clever smith can make all the metal casings required, so that all that is necessary is to import the candles from either Germany or France and fit them up according to circumstances, and with the experience of the French army before us, as shewn by the reports of the Minister of War, there is every reason to hope for equally favourable results in reducing the mortality in the European army in India from such diseases as are transmissable by drinking water.

PROPOSED REGISTRATION OF STILL-BORN CHILDREN.*

BY R. R. RENTOUL, M.D.

(*Continued from page* 47.)

A REFERENCE to the laws regulating the compulsory registration of still-births in European countries, shows that this country is very far behind. In the Netherlands, registration is made compulsory by Article 32 of the Civil Code. In Switzerland, Section 14 of the Federal Law, December 24th, 1874, regulates the practice. Only those conceptions of six months are registered, and they are registered both as births and deaths. In Germany, registration is carried on by the registrars of births. Still-births are registered as deaths (Act, January 6th, 1874). Their law does not define the term "still-birth," but in practice, only a fœtus of seven months is capable of living, and those born before that age are not registered. Paragraph 23 of the Act enacts that "when a child is born dead, or dies during birth, the fact must be notified by the next day at latest." Anyone failing to comply with this regulation may be fined £7 10*s.*, or be imprisoned. Two special forms for registering a still-born child are supplied. In one, the fact that the child died during birth is noted; while the other is used in those cases where the child is born dead, *i.e.*, died in the womb. Abortions and mole conceptions are not registered. When the informant registers a still-birth, the Registrar interrogates the informant as to whether the child died during delivery, or died in the womb.

In Greece, registration is not compulsory, and no penalties are laid down. They are registered as deaths, and their legal definition of a still-born child is "a dead newly-born child." It would appear that the body of every newly-born child must be taken to the registration officer, unless its birth has been registered before as a live-birth. The Act of October 29th, 1856, regulates the procedure. In an Appendix to the Act, there is a form relative to the showing of a still-born child to the Registrar.

In Denmark, registration is compulsory by the Act of January 2nd, 1871. It is performed by the Registrar of Births and Deaths. A penalty of ten kr. is imposed if the death is not registered; and if a midwife fails to register, she is fined 100 kr. (one kr.—about one shilling). By a still-born child is understood a child which has issued forth from its mother after the expiration of the twenty-eighth week of gestation. A special form of certificate for still-birth is provided for the use of midwives.

Having tried to give some idea of the number of still-births, I shall next proceed to answer the question, "Is the criminally causing of children to be still-born frequent?" Coroner Braxton Hicks, in his pamphlet, "Hints to Medical Men granting Certificates," says: "Many children who are termed still-born are not really so, but have been born alive and died soon after, sometimes from natural causes, but also from suffocation and other illegal means. In fact it is to be feared that many children, termed still-born, are disposed of in such ways." Tidy, in his "Legal

* Paper read before Manchester Medl. Assoc., May 6, 1892.

Medicine," says:—"So notorious is it that a large number of those cases could be averted, that some legislation is urgently needed." Stevenson, in his "Medical Jurisprudence," says:—"There is reason to believe that the non-registration of births of children born dead, leads to many being disposed of as still-born, which really came living into the world, but have died from neglect, exposure, or violence." In the return already referred to the following pointed statement occurs:—"The Secretary of State has reason to believe that in some places the practice prevails of entering in the cemetery book, as still-born, children who have survived their birth by only a few hours, and over whose body no religious service has been performed." In the *Lancet* of October 11th, 1890, a writer states:—"That a midwife known to him signs a declaration of still-birth of those children who die within five or six hours after birth." Previous to the passing of the Births and Deaths Act 1874, and when no penalties were imposed for burying live-born children as still-born, the custom of burying live-born children as still-born was common. I have met with a case where a woman ruptured the membranes, the os being dilated to a small extent only, in the hope that by so doing the labour would be so delayed that the child would be still-born. Again, it is well known how easy it is to prevent a child from taking its first breath. Stevenson says:—"A wet cloth may be placed over the child's mouth, either during birth or afterwards, and before or after the performance of respiration." I have been told of a case where a midwife had a large number of "still-births" in her practice, and where she was found to have placed a hollow sponge (cup-shaped) over the child's mouth and nose, so as to prevent it from breathing while being born. It is well-known how easy it is to allow the fully-born living, but non-breathing child, to lie on the bed without making the slightest endeavour to make it respire, and that such want of action cannot be uncommon among a certain class. Also that many children are still-born because the mother allows herself to remain in labour for too long a time before calling in aid. It has been suggested that one reason why efforts are made by some to have dead—live-born children interred as still-births—is that by so doing the burial fees are greatly lessened.

If a still-born child can be interred for one shilling and a live child for ten shillings and sixpence, we may expect this to make a difference. Perhaps if we had the system of burial by municipal authorities as in Germany, there being no private undertakers, and where the funeral of a child is carried out for about threepence, this would meet the above argument.

A practitioner, who has watched the practice of midwives, writes me as follows:—"There exists a deplorable (might one not say criminal?) amount of negligence in the treatment of 'apparently' still-born children. I have repeatedly saved children that have been thrown aside by the *diplomated midwife*. The whole system is shocking."

A strong incentive to the criminal causation of still-birth is *illegitimacy*. In 1890, of 896,937 births in England and Wales, 38,412 births were illegitimate, or about one in every twenty-two births. This shows there is a large field for criminal still-born business. I ask, what father, or pregnant woman of an illegitimate conception, would not pay a large sum to any who guaranteed that the child was to be still-born? The experience of our police and coroners' courts answer. We know that large quantities of drugs are consumed so that the child may be still-born, and that in every city the professional abortionist makes a large income. Is it likely, then, that when these methods fail, not to mention the many "checks" used to prevent conception, that others will not be used when the child is being born? The fact that in this country a woman condemned to death cannot have her execution stayed unless she proves she has quickened, encourages the present disregard for infant life in the womb. That is, the infant in her womb, although a living child, is legally not worthy, in such a case, of any consideration. The plea of pregnancy, in bar of execution, holds good only if quickening has taken place, the vulgar idea being that the child receives life only when the woman quickens. Otherwise, not only she, but the child in the womb are both killed. It would be well if some member of Parliament would raise the question, "Has the Crown the right to take the life of the child in the womb of the woman condemned to undergo the sentence of death?" In France this law does not exist, for there the proof of pregnancy, not of quickening, is sufficient to stay execution.

It may be suggested that the Act relating to the concealment of birth lessens the value of the demand for registration. By the 24th and 25th Vict., chap. 100, it is enacted that "If any woman be delivered of a child, every person who shall by any secret disposal of the dead body of the said child, whether such child died before, at, or after birth, endeavours to conceal the birth thereof, shall be guilty of a misdemeanour, and being convicted thereof shall be liable, at the discretion of the court, to be imprisoned for any term not exceeding two years, with or without hard labour."

The object of the Act is to prevent secret disposal with a view to child murder. It refers to a child which dies either before, during, or after birth. It is not a crime to conceal the body of a live child, unless it die before the fact of its birth was made known. The body must also be "secretly disposed of." And this

is a weak point, as it has been stated by a judge that because a woman disposed of her child in a field from which she might have been seen from the public road, she did not "secretly dispose" of it. Again, a great deal depends upon the definition given to the term "child." Justice Chitty has said it is no offence if the child so concealed was only seven months old—a somewhat strange ruling, seeing the child is viable before the seventh month. Another judge has laid it down that it is not a "child" unless it could live when born; while a third has said that if it had the outward form of a child this is sufficient. In a proposed "new criminal code," drafted by Sir J. F. Stephen, late judge, it was suggested that "no fœtus is to be deemed a child within the meaning of this section which has not, when born, reached the period at which it might have been born alive." I also call attention to the above Act, because some practitioners give very wrong advice regarding the disposal of premature births, still-born or otherwise. Kinkead, in his "Medical Practitioners' Guide," says:—"If any practitioner secretly dispose, or aid, or abet, at such disposal, he is guilty." It is also criminal to conceal the birth of a putrid fœtus, because the Act refers to a child which dies *before birth*, as well as those dying during or after birth.

The Scottish and the German laws go further than the English. By the 49th George, chap. iv., "concealment of pregnancy"—not of birth—is criminal. It enacts: "That if any woman shall conceal her being with child during the whole period of her pregnancy, and shall not call for, and make use of help and assistance in the birth, and if the child be found dead, or missing, the mother may be imprisoned for two years." This law lays it down that it is the duty of every pregnant woman to make preparation for her confinement and infant. I have asked Dr. Littlejohn if he thinks the words "during the whole period of pregnancy" would exclude those women who conceal their having aborted, or miscarried. He refers me to McDonald's "Criminal Law of Scotland," 2nd ed., 1877. It appears the Act refers to all cases, but that it would be a very strong point in the woman's favour if she had been delivered of an abortion or fœtus; if so, she would be outside the statute. The Act asks that the child be *found dead*. Therefore the child must have been born alive, or, in other words, pregnancy must have lasted so long as to make a living birth possible. In Scotland there is no Act corresponding to our "concealment of birth"; and neither the Scottish nor the English Acts lessen the force of our request for registration. Having referred to these Acts, I shall try to define some terms of which we must have clear ideas before any legislation on the subject of registration of still-born children is entered upon.

What is a "still-born" child? This may be met by asking another: What is a "live-born" child? The medical and legal definition unfortunately differ greatly, physiology and law being in direct conflict. Medically, the child from the instant of conception has life. In legal language, the live-born child is one whose body being "completely born shows some definite sign of life." In this definition there are two expressions which must be considered—viz., "completely born" and a "sign of life." To be completely born it is necessary that the entire body of the child be born, but it is not necessay that the placenta be delivered, or the cord divided. Legally, therefore, as long as the child is in womb, it is not a living being, and so it is assumed that every child is born dead until evidence to the contrary is produced. Next, what constitutes "a sign of life?" The fact that a child after its complete birth, not during, has been observed to move a limb, or a muscle to twitch, that the cord has been seen to pulsate, that its heart has been felt or heard to beat, that its cry has been heard, or that it has been seen or heard to show any physiological sign of life or vital action is *legal evidence* that the child has been live-born. It need be scarcely added that had the child been born dead it could not show any of these signs of life. From the legal view of live-birth, it is not necessary to prove the child has breathed, as a child has been known to live for some hours without breathing. Neither is the fact that the lungs float in water, a proof that the child has legally lived. It has, unfortunately, sometimes been held that breathing is a complete sign of live-birth; but a child may breathe before being completely born, as when the head only is outside the vulva. Breathing, when coupled with complete birth, is only one of the signs of live-birth, and so a child may legally live, although it has not breathed. Further, the law does not ask that the child born alive shall be "a viable" child—that is, one capable of living for some time after birth. It only asks that the child after complete birth has been observed to show "a sign of life." And if this sign last for one part of a minute, the law is as satisfied as if it had lasted for a year. Nor does it ask whether the child is mature or immature, healthy or diseased, for both immature and diseased can live. It will be seen that in the great majority of confinements only those present at the birth can give any useful evidence as to the live-birth of a child. If the evidence of live-birth is to rest upon information obtained only through *post-mortem* examinations—if I may be allowed to use the term—then it must be owned it is very difficult to state positively that the newly-born child has been still-born. I use the term "newly-born child" as applicable to those twenty-four hours old. The condition of the lungs, state of the cord, appearance of the

centre of ossification in the inferior femoral epiphysis, state of the kidneys, bladder, and bowels, do not often supply us with that amount of evidence which a judge and jury would think it right to convict upon. The importance of these facts are enforced because the charge of murder cannot be brought against any person who prevents a child while being born from breathing. The law holds that the child in the womb is dead in so far as proving live-birth is concerning, and, therefore, that the child cannot be killed. Consequently, it follows that a child can be murdered—*i.e.*, prevented from breathing and living during birth, while all the culprit has to say is, "the child was still-born." Such a state of the law is a direct incentive to crime, and places a high premium upon child murder. In fact, in one case a woman who cut a child's head off while it was being born was acquitted. No doubt, if a person maliciously injure a child during its birth, so that after it is completely born it dies from the injury, this is murder. But such do not refer to those incompletely or still-born. In cases of criminal abortion, also, the charge is not one of murder.

The next question for consideration in relation to live-birth is—what is the earliest age at which a child, when completely born, can show "a sign of life?" For upon the answer to this question must depend our answer to the other—down to what age of intra-uterine life should still-born children be registered? In some countries, as Switzerland, only such still-born children as have completed the sixth month of intra-uterine life are registered. In Denmark, those attaining the twenty-eighth week must be registered. In their "midwives' register" they are entered under one or two headings: 1st, those still-born—*i.e.*, those dead in the womb; 2nd, those born alive, but asphyxiated and not resuscitated—a most practical and important distinction. In that country in the five years, 1883 to 1887, 33·6 per cent. of still-born children were dead before birth—*i.e.*, exhibited signs of maceration. In the Netherlands no legal definition is given.

But if complete delivery, coupled with the performance of some vital act by a child, be a sign of live-birth, then still-born children under the sixth month must be registered. Barnes states that children, which have completed the fourth month when born, may live for some hours. Athill informs me he has seen a child, under four months, breathe after birth. No doubt, children of this age die soon after birth. But for the purposes of registration, the question of the duration of life after birth need not be entered upon. The question of intra-uterine age might be ignored if, for the purposes of registration, it were enacted that all still-born conceptions, expelled from the womb, and having the outward form of a child, were to be registered. If it be held that only those still-born children of nine, eight, or seven months, viable children be registered, we accept the barbarous admission that because a child has not attained the seven month its life is not to be considered. My definition of a still-born child would be:—"A child, which before, during, or after its birth, has not shown or does not, on examination of the body, show any sign of life. For the purpose of registration, I would define a "child" as a conception born after four months of pregnancy, the pregnancy being dated from the last day of the last period. Consequently, every still-born child of four months and upwards would be registered. The present Registrars of Births and Deaths should register still-births, and those persons, already mentioned as having the responsibility of notifying deaths, should also be called upon to notify still-births.

No still-born child should be interred until a certificate of registry from the Registrar of Deaths is presented. Penalties for neglecting to register should be provided. Some may suggest that both the births and the deaths should be registered—such being the custom in Switzerland. In Sweden, the birth is registered. In Germany, France, Belgium, Denmark, and Greece, the death is registered. I think we should register the death only and not the birth. It should be registered within twenty-four hours after delivery, two witnesses to the *fact of birth and death* being required by the Registrar. In Berlin and Brussels, the office of the Registrar is open on Sunday, as well as on other days. Heavy penalties should be provided for the punishment of those who use any means which cause the child, while being born, to be still-born. Against those who fail to use every means to induce the newly-born child to breathe, penalties should be provided. While those who burn the bodies of newly-born children, or dispose of them in any way, other than burial in a burial-ground, should be fined. For reasons already stated, the medical certificate of still-birth, should contain particulars of the sex, date of confinement, and address at which it took place, whether the confinement was natural, or artificial, mode of presentation of the child; measures used at the confinement; name of medical practitioner present at the birth or name of other person present; number of family; number of previous still-births; length of gestation; if the child shewed any sign of life; (*a*) before: (*b*) during: (*c*) or after birth; legitimate or illegitimate; name and address of father and mother; cause of death; signature of practitioner.

In Sweden the sex, legitimacy or illegitimacy of the child are entered under the column containing the Christian name—as still-births have no such name. It would be well if we followed the example of France and Germany, and tried to have it provided that the body of

every still-born child be inspected before burial by the Medical Officer of Health, or other practitioner. In Brussels, the birth of a still-born child is notified to the Civil Office. This office makes out a list of all the deaths, daily, and sends this to the Médicin de l'Etat Civil. This official must call before 10 A.M. at the house at which the still-birth lies, and must examine it carefully. If he comes to the conclusion that it has died a natural death, he fills in a report, and has it forwarded to the Hôtel de Ville. If he is not satisfied, he sends this report of verification of death and identity to the police authority. No burial can take place in this case until authority is given by the Hôtel de Ville, or by the police. Printed instructions are issued by the Hôtel de Ville to the medical official. Articles 6, 7, 8 and 9 of these lay it down as follows:—"If the body present any indication of death from violence, or other suspicious circumstance, he must give notice in writing at once to the office of the civil state as well as to the divisional police. (7.) He shall transmit to the police at the same time the certificate of verification of death, notifying that permission to bury must not be given without the authority of the police, and to inform the relatives of such notice. (8.) The verification of the death of the still-born, or of newly-born infants, requires more careful examination by the medical official. He must state on his certificate to the civil authorities whether the infant was dead before, or died during or after birth, and in the last case how long it lived after birth. (9.) If he thinks the child is not dead, he himself is to proceed at once to use all measures, and at once to inform the doctor who attended the child; and in all cases he must not fill up his certificate of verification until he is certain of the disease, even supposing another visit is necessary." The system in force in Paris is almost similar to the above. In Switzerland, still-born children, although registered, are not inspected.

It may be said, the cost of carrying out the registration of still-births would be too great. The cost of the medical certificate of the cause of death is, according to Farr, one shilling and sixpence to the country. If then 60,000 still-births were registered each year at this cost, surely the country would not object to pay the small sum of £4,500 a year.

It is the duty of the medical profession to bring this question to the front. The time is ripe for a public protest against the gross indifference of women of all classes—rich and poor—to the child in the womb. The present state of affairs is a public scandal. A class of political economists may go about saying, the human animal is a glut in the market, and so, not having the value of a pig, calf or sheep, it may be conveniently placed upon that little list, from which they hope it will never be missed.

On the other hand, our words and actions must be made to give a strong colour to public thought; to instil the knowledge, that from the moment of conception there is *life*; that this *life* has the right to claim our protection, and that our duty must be to bring about the registration of still-birth. In some respects the protection of child-life in the womb and during birth is on the increase. Thus in the charge of criminal abortion, such can hold good if attempts to procure abortion have been made upon a conception but a few days old. Again, a child of four months old, if legally born alive, can inherit property and have money left to it. Here registration of live-birth or of still-birth is of the greatest importance. Tenancy by "courtesy," also depends upon the birth of a living child.

But, on the other hand, the charge of infanticide cannot be brought if a child is killed *while being born*. And here I may say it would be more humane and more worthy of an even professedly civilized community if the recommendation of the Harveian Society on infanticide were adopted, and that for the purposes of conviction complete separation of the child from its mother were not required, but proof only that the child was living during birth, and that it had died from violence. By the Prussian code, any woman who intentionally kills her illegitimate child either during or after birth is charged with infanticide. Although in this country infanticide is murder, still this charge is very frequently reduced to that of concealment of birth. In the suggested new criminal code already alluded to, it was proposed that if any person cause the death of any living child which has not proceeded in a living state from its mother, they shall be liable to penal servitude for live.

If we bear in mind the difference in the medical and legal definitions of what a live-birth is, that from the legal view the child performs some vital act *outside* its mother's womb which *very same act* it performed when *in* her womb, we can see that the difference is one of *locality* only and not of vitality.

And if we can induce our lawmakers to extend further official recognition to the child in the womb by passing an Act for the registration of all still-born children, then we, as medical practitioners, possessing the power of harmonising law with medical science, should be able to say we had not altogether neglected our duty towards this important subject.

Unna's Glycerine Jelly for Eczema.

R.	Gelatinæ	...	15 parts.
	Zinci Oxide	...	10 „
	Glycerini	...	30 „
	Aquæ	...	40 „