

MATERNITY & CHILD WELFARE

MEDICAL SOCIAL



CONTENTS

- Babies in Peril, or Mother and Infant Welfare Centres.
Miss Edith M. Bennett.
- The Endowment of Motherhood: (2) Its Relation to Child Welfare. Miss K. D. Courtney. (3) Widows' Pensions. B. Seebohm Rowntree. (4) Insurance for Marriage. Mrs. Mary Higgs.
- New Zealand Society for the Health of Women and Children.
- Cartoon: Peace at Home, Nov. 11, 1918.
- Britannia and Her Young Families.
- Annotations.
- Food and Feeding Problems.
- A County Council Scheme for Maternity and Child Welfare.
- Child Welfare Biographies: (1) Pierre Budin and His Work (illustrated).
- Training and Instruction.
- Books and Journals.
- News and Coming Events.
- Letters to the Editor.
- Abstracts and Notes.
- Appointments.
- Answers and Comments.

FOR FULL CONTENTS SEE p. XI.

BYAM SHAW 1917

CHILD WELFARE BIOGRAPHIES.

(1) PIERRE BUDIN AND HIS WORK.

DURING each of the four years from 1886 to 1890 the deaths among infants in Paris during the first year of life amounted to 21 per cent. of births and this appalling rate was quite apart from the infants sent away into the country to be nursed, among whom the mortality was said to be even higher. It was in these circumstances that Pierre Budin organised at the Charité belonging to the Assistance Publique in Paris the first "Consultation pour les nourrissons," which have ever since been associated with his name, the programme being based on similar lines to that of the Maternité founded in 1890 by M. Herrgott at Nancy. Each week the women who had returned home after being confined at the Charité brought their babies to Budin's infant consultation, where they were weighed and examined, careful notes being taken of their condition. Breast-feeding was constantly insisted on, women who could only partially feed their babies being encouraged to do so, when it was often found that the quantity and quality of the breast milk improved later. In these cases of partial breast feeding, specially sterilised milk was supplied to supplement it, the mother fetching or sending for it every day. When the mother was unable to suckle her baby at all, it would be fed entirely on sterilised milk from the consultation. To each mother was given a card with her baby's registered number inscribed on it, the date of birth, the weekly weight, and instructions for feeding it. The upper half of such a card is shown in fig. 1. Thursday morning at 9 a.m. was the time of attendance, and we may picture these early morning clinics as a

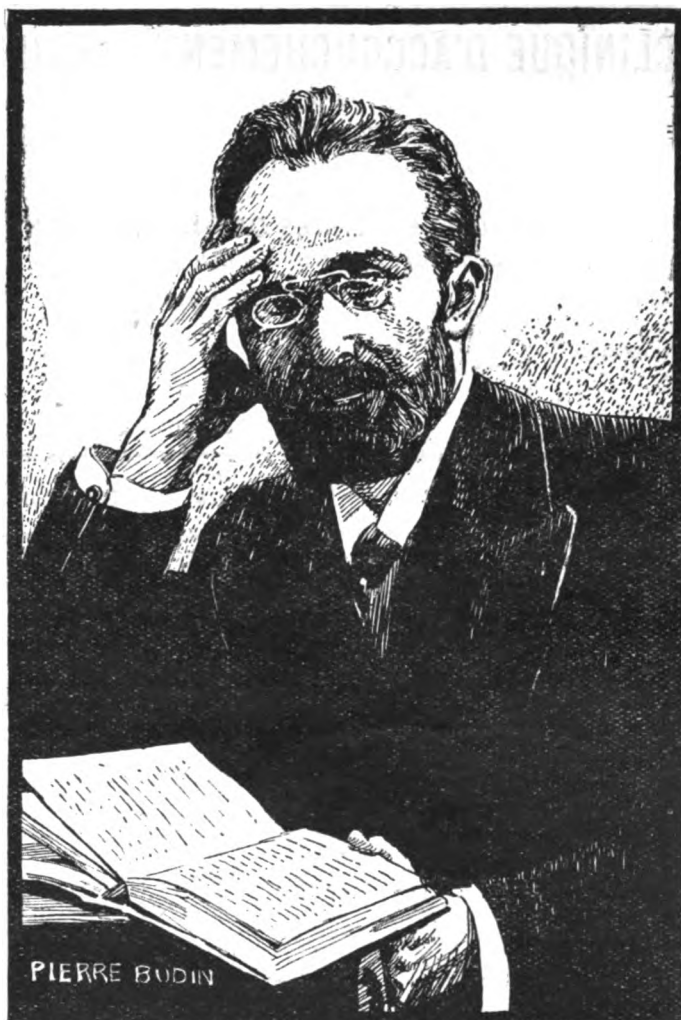
beginning of "liberty, equality, fraternity" for Paris babies. When desirable the baby was brought to the consultation oftener than once a week. The greatest obstacle to the success of the undertaking was found to be the "bizarre counsel" of well-meaning neighbours (such neighbours are known even in Brixton), and it was for this reason that work was at first limited to women who had been confined at the Charité and, having thus grown accustomed to the routine of weighing and feeding, were able to persist in well-doing in spite of criticism.

A Pioneer Work and its Results.

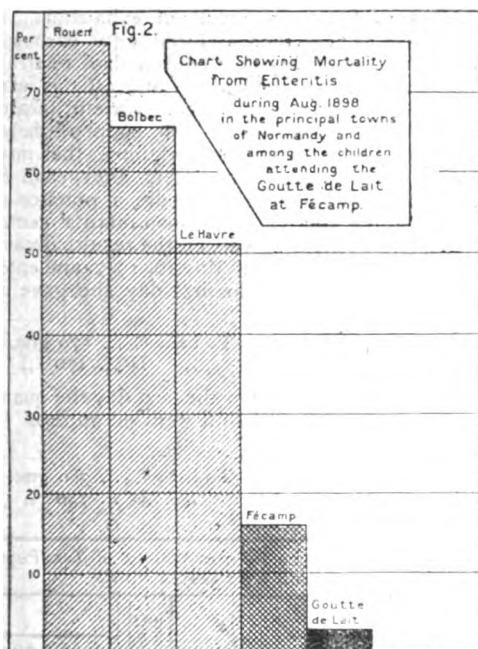
The success attending this remarkable pioneer effort to encourage breast-feeding is indicated by the fact that in the month of June, 1899, 60 per cent. of the infants attending the consultations were breast-fed, 34 per cent. were given sterilised milk to supplement the inadequate maternal supply, while only 6 per cent. were artificially fed entirely. The milk, sterilised in a bain-marie, was distributed in small bottles, each containing only the quantity for one feed, thus avoiding over-feeding as well as the risk of contamination.

From the very commencement of the consultations Budin had the satisfaction of noting that the general health of the infants attending was at a much higher level than that of the average Paris baby.

There were no cases of rickets among these infants, no dyspepsia and no scurvy. Of the 435 infants under supervision between 1892 and 1899 for periods varying from one month to two years, thirty-two died, making a total mortality of just over 7 per cent. Among the deaths only one was due to diarrhoea and one to so-called infantile cholera, the latter occasioned by impure milk given to the child in spite of express instruction to the contrary. Paris was not unique in this respect. The



PIERRE BUDIN. 1846-1907.



follow. This, too, should be held in remembrance now that every infant welfare centre in this country does the same as a matter of ordinary routine.

Budin was a firm believer in giving undiluted milk to children. Contrary to the experience of Dr. G. Variot, also with French babies, which we have already published (*M. & C. W.*, October, 1917, p. 438 ff.), Budin did not obtain favourable results from the dilution of cow's milk with water for hand feeding. He points out in his lecture on the subject that if in order to adjust the surplus of casein, water is added to cow's milk, the quantities of butter, sugar and salts are reduced below the normal proportions found in human milk. He gives an example of a twin who was fed upon pure sterilised milk at the Charité gaining about 22 grm. a day. On the fifth day diluted milk was substituted for the pure milk and continued during five days. The increase in weight during this time showed a daily average of only 6 grm. The pure milk was replaced and the child's weight increased again at the normal rate. This chart is reproduced in fig. 4. It has not the same importance to us as it had to Budin because we know well enough how the deficiencies in diluted milk can be made good. But we give it because it is a striking instance of the way in which Budin used the weight chart to prove the various points of his teaching. Budin is, however, careful to add that in certain cases, where the digestion of the child is weak or the cow's milk is especially rich in casein or butter, dilution with water is to be recommended, while we may recall that Dr. Variot admitted the suitability of pure milk after the first six weeks of life.

The Milk Problem in Budin's day.

It was a great achievement to establish the fact that, where breast-feeding is impossible, infants may thrive

upon pure cow's milk carefully sterilised, but it was equally necessary to assure an adequate supply of such milk to the poor. In 1896 the Municipal Council for Paris instituted an inquiry into the whole question of the milk supply, Dr. Budin drawing up a report on the adulteration of milk then largely practised in Paris and elsewhere, and urging the provision of an untainted unadulterated supply available for all classes. Milk he divided into three categories according as it contains more than 4, between 4 and $3\frac{1}{2}$, or between $3\frac{1}{2}$ and 3 per cent. of butter-fat. A fluid containing less than 30 grm. of butter-fat and 90 grm. of other solids to the litre he declined to call milk at all. He insisted that milk must not be skimmed or watered before being offered for sale. But this was not enough for him. Milk must be free from germs, and must not be preserved by the addition of chemicals. It might be sterilised, although in Budin's time many believed that milk is in some respects less valuable when boiled. The primary aim, therefore, was to secure pure raw milk, necessitating both dairies and cow houses as well as the beasts themselves being under careful supervision. Each cow was to be sub-

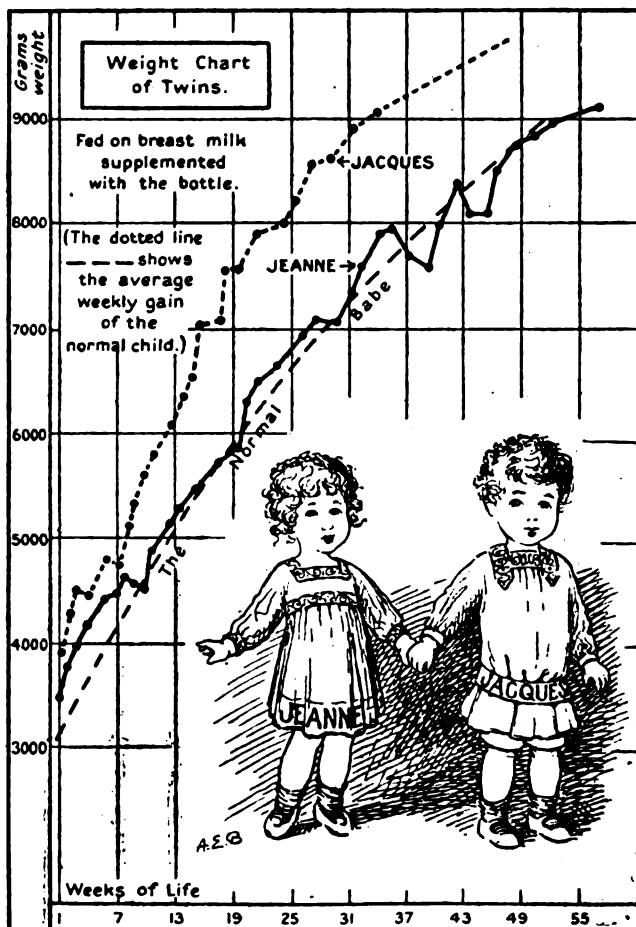
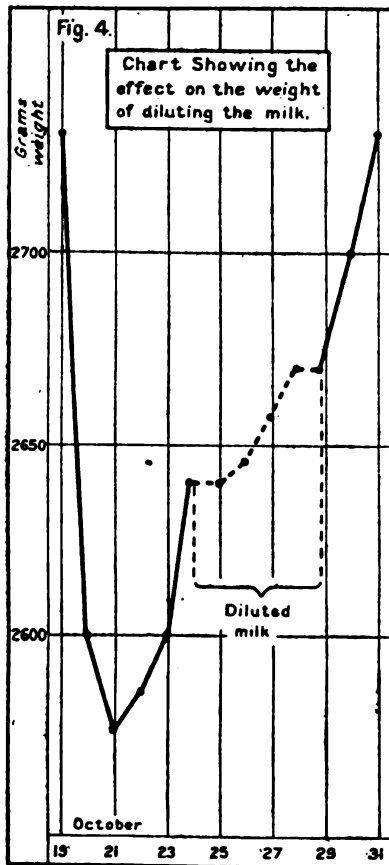


FIG. 3.



mitted to the tuberculin test and thereafter inspected at least once a month. The final point was the distribution. M. Paul Strauss proposed the free distribution of sterilised milk to necessitous mothers. Where the mother was too far from the distributing centre to fetch the milk, a steriliser might be supplied to her. For the general public it was proposed that guaranteed milk should be supplied at as low a price as possible.

An interesting chapter in Budin's work deals with premature and debilitated infants, whose upbringing was, in the manner more in accord with French than English sentiment, largely carried out at the Charité by wet nurses. The nurse was allowed to retain her own babe because it was found that the weakly foster-babe was unable to exert sufficient suction to promote a copious supply of milk. The question how many wet-nurses were required for a given number of weakly babies was answered by the practical experience at the Charité. In the year 1895 there were on one occasion more than forty infants for fourteen nurses, each of whom had in addition her own baby. This works out at four or five babies per wet-nurse, each nurse giving about forty feeds a day, in the case of her own baby supplemented with a quantity of sterilised milk. With the entire care of the children added, this was found to be an impossible task for the women and the supply of

milk tended to fail as a result of exhaustion. The number of babies was then reduced until each nurse had to provide only thirty-four feeds a day whereupon the supply of milk increased again and all the infants fed gained weight at normal speed. Careful measurements of the total quantities of milk supplied daily by various nurses were made by weighing the infants immediately before and immediately after each feed (again, be it noted to Budin's credit, a practice now largely become the routine at our own infants' centres). A single example may be given of the results obtained. Wet nurse D was confined on May 10, 1917, and entered the Charité on June 5. On the first day she gave milk as follows:—

To baby A ... 190 grm.	To baby C ... 70 grm.
" B ... 120 "	" D ... 170 "

making a total of 550 grm. On the next day the quantity increased to 1,040 grm., and so it went on until on June 18 the quantities were:—

To baby A ... 480 grm.	To baby C ... 380 grm.
" B ... 330 "	" D ... 740 "

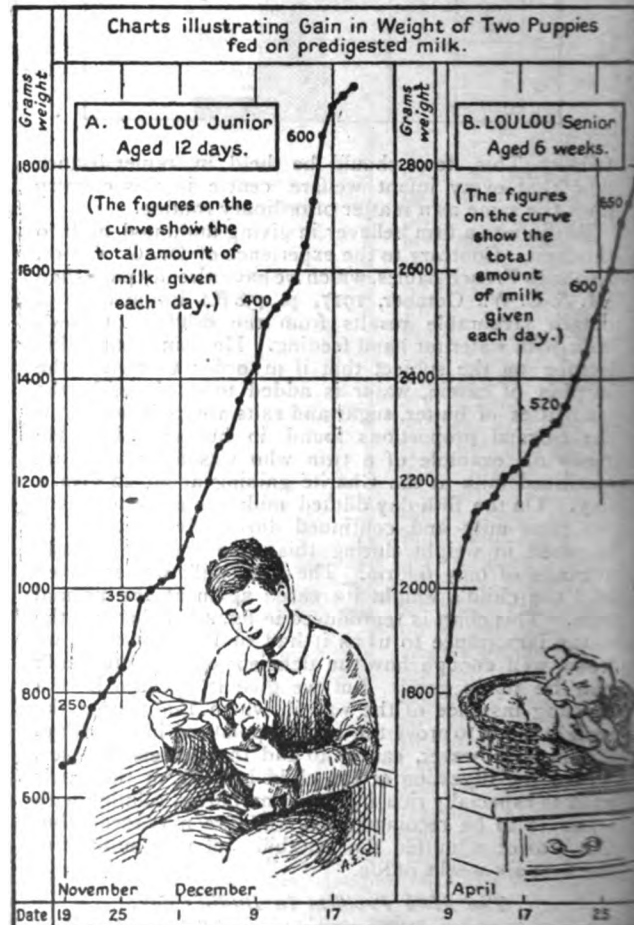


FIG. 5.

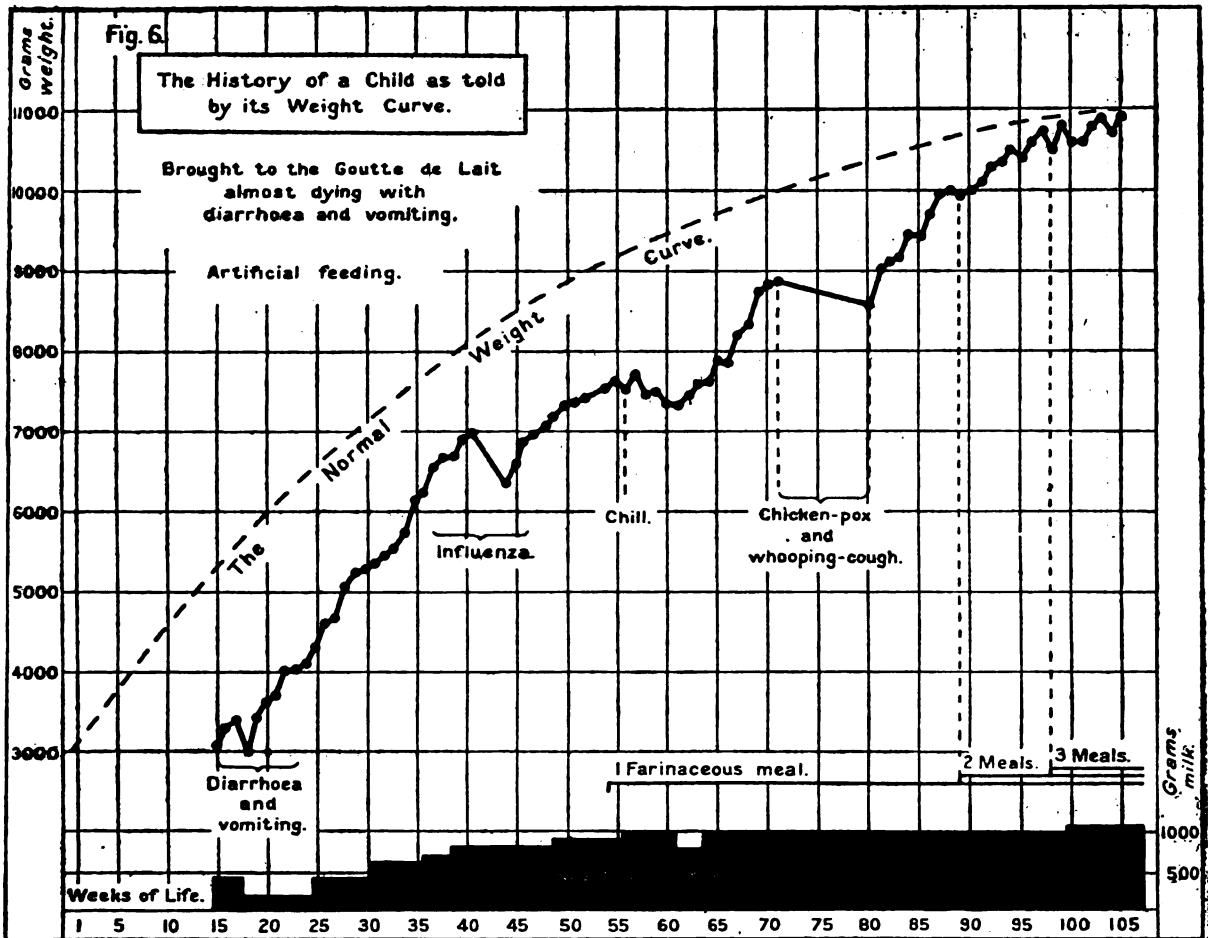
and although baby B seems to have been easily satisfied and baby D really quite too greedy, the result was considered highly satisfactory with a total output of 1,930 gm.

An Experiment with Humanised Milk.

In 1887, Dr. Budin and his colleagues tried on a large scale the experiment of humanising and pre-digesting milk for prematurely born and weakly babies who seemed unable to digest the nurses' milk. M. Ch.

the laboratory boy, trying to grip the bottle-neck in its two paws and sucking away with extraordinary avidity." It will be seen from the chart that its confidence was not misplaced, it being understood that the little pictures of the two Loulous are not actually taken from Budin's book. Convinced by these and similar results, the milk was then given to infants who did not appear to assimilate human milk. The results were most satisfactory.

We may conclude this little sketch of Budin's work with an extract from a speech which he made in April, 1892,



Michel succeeded in rendering the humanized cows' milk easily assimilable by the infant digestive organs by means of preparations from the pancreas of a calf. It is difficult to realise now that this was a new experiment, but so new was it that its authors first tested this humanised pre-digested milk upon young animals, thus satisfying themselves that the milk had lost none of its good qualities in the process. Fig. 5 reproduces the weight curves obtained in the case of two such dog-babies. The milk was put in a bottle with a teat and in Dr. Budin's own words "nothing could be more amusing than to see the little dog, held in the arms of

at a Socialist Congress: "We have (he said) during the last few years witnessed a revolution, made possible by the work of Pasteur, in reducing the dangers of maternity. Let us hope that we may witness a similar revolution on behalf of the babies. Thanks, again, to the work of Pasteur and those who have followed him the sterilisation of milk will, when it becomes a habit, reduce in no small degree the present appalling infantile mortality."

Seven years later in another lecture Dr. Budin was able to state that the hopes he then expressed were coming nearer to realisation owing to the work of the Consultations and the Gouttes de Lait. Much remained

to be done, and he urged his hearers to bear personal witness in their families to the value of breast-feeding as well as to use the knowledge they now possessed, to advance the supplementing of insufficient maternal milk by artificial feeding, to insist upon the careful sterilisation of the cow's milk used for this purpose, and at the same time to do all in their power to bring about the establishment of consultations both in the town and in the scattered rural communities.

The Budin Foundation.

The care of the mother and child was uppermost in the thoughts of Budin up to the time of his death. His colleague, M. Paul Strauss, records that "in stating his last wishes, and in his last letters to his friends and pupils, Pierre Budin recommended us to think constantly of the little children of France—and on the eve of his death he confided in me the trust of watching over the Infant Consultations, his crowning work, and over the League for the Prevention of Infantile Mortality which we founded together . . ." It was rightly felt that the best memorial to his memory would be an institution where the work he had so much at heart could be continued on the lines of his own teaching. In 1909, two years after Budin's death, the Budin Foundation was opened in Paris, by a happy coincidence within a stone's throw of the Pasteur Institute, the methods of which had been so extensively applied by him in his work. The Foundation was to be at once a model infant welfare centre and a school of puericulture. The building was especially designed for the purpose, great care being taken to ensure copious penetration of light and air. A garden was provided for the use of the mothers and babies in fine weather in place of the waiting-room. Consultations were to be held twice a week by a doctor and his assistant, aided by women workers as home visitors. The children were to attend

the centre up to the age of two years. The work was to be essentially prophylactic, breast-feeding being "the basis of puericulture." Ailing children were to be sent for treatment to their own doctors in accordance with Budin's principle: "I do not propose to enter into competition with practitioners; I am solely concerned with instructing the mothers." An attempt was made to reproduce as far as might be the atmosphere of Budin's own consultations. Speaking at the opening ceremony, Dr. Ch. Maygrier said, "The organisers have striven essentially to create here an atmosphere analogous to that at the Charité, the Maternité, and the Clinique Tarnier, where Budin moved about among the babies, who were dear to him, bending over them with unwearying solicitude and devotion, hearing the mothers patiently, exhorting and teaching them their duty with a gentle authority which won the admiration of all who saw him." To fulfil Budin's complete programme, Dr. Maygrier added, the Foundation "must be also a centre of instruction—a veritable school of puericulture, and all has been planned from this point of view. The premises are arranged so that a number of helpers can have access to them—doctors, students, midwives, young women—all desirous of familiarising themselves with the principles of infant hygiene. Practical courses of puericulture can thus be followed, and will complete the instruction received at the consultation."

Thus Budin, though dead, still speaks, but to us his most lasting memento is in the graphic method of records which he instituted. Our final illustration (fig. 6) tells the story of a child brought to the Goutte de Lait almost moribund as a result of diarrhoea and vomiting. The chart shows how by various stages he was coaxed back to life, although befallen again and again by misfortunes. That baby comes of age this year, and we doubt not that he has been a sturdy champion of French liberty. We greet him in Budin's name.



Training and Instruction.

Plunket Nurses for District Midwives in New Zealand.

At the request of the Public Health Department of New Zealand, arrangements have been made during the past year for some of the district midwives to go through a period of training at the Karitane-Harris Hospital. No fees are charged for the training of nurses sent by the Public Health Department.

Lecture Programme.

(Details of lectures for the whole Michaelmas Term were given in our September issue.)

THE MOTHERS' UNION.—A course of addresses for working women is being held on Tuesdays, at 3 p.m., at Mary Sumner House.

A further course on Some Remedies for Social Evils is being given on Wednesdays, at 3 p.m. :—

- Nov. 20. "The Girl Guides." Mrs. Mark Kerr.
- Nov. 27. "The Women Police." Miss Allen, W.P.
- Dec. 4. "New Methods in Rescue Work." Miss Andrews, Head of Queen Elizabeth's Lodge.

On Thursdays, at 3 p.m., a course on The Vote and Local Government is being given :—

- Nov. 21. "Questions of Public Morality."
- Nov. 28. "Maternal and Infant Welfare."
- Dec. 5. "Preventive Health Measures." Sir Walter Fletcher, M.D.

In each case course tickets, 2s.; single tickets, 6d.

ROYAL SANITARY INSTITUTE.—A course of lectures for women health visitors, tuberculosis visitors, school nurses and school teachers is being held at the Royal Sanitary Institute, 90, Buckingham Palace Road, London, S.W.1. The lectures for the coming month are :—

- At 6 p.m. :—
- Mon., Nov. 18. } "Prevention of Communicable Disease."
- Wed., Nov. 20. }
- Fri., Nov. 22. "Tuberculosis." R. Veitch Clark, M.D.
- Mon., Nov. 25. "Venereal Diseases." Jessie M. Campbell, M.D.
- Wed., Nov. 27. "Methods of Teaching Hygiene." Miss Constance Barker.