

THE MASTER OF THOSE WHO KNOW.

It is comforting in these days when the angel of death is abroad and the spirit of destruction is sweeping over fair countries, to read an account of the life of a man who gave himself wholly to constructive work. Such a man was Louis Pasteur, of whose labours in the cause of truth and humanity an admirable record has been written by Mr. STEPHEN PAGET. This volume, *Pasteur and After Pasteur*, is the first of a series of medical history manuals which is to be published by Messrs. Adam and Charles Black under the editorship of Dr. COMRIE, of Edinburgh.⁶ The editor says in his introduction:

For the most part noteworthy improvements in medicine have arisen out of definite new discoveries in the physical sciences, have followed upon the development of fresh processes in the arts, or have been gained by the labour of outstanding individuals. The present series of medical history manuals has for its object to describe some of these discoveries, processes and individuals, and to trace in each case the epoch that has resulted.

Mr. Paget in this volume outlines the life of Pasteur and describes many means for the prevention and expulsion of disease which have developed out of his work. It is founded on the well-known life by Vallery Radot, the son-in-law of the famous scientist, and Mr. Paget hopes that his little book may be regarded as a signpost pointing to the reader the way to the study of that fine work. The biography proper occupies but a small part of the book, the rest being devoted to accounts of Pasteur's achievements in chemistry, fermentation, rabies, and the diseases of silkworms. Excellent summaries are given of the results that have followed his discoveries when applied to tuberculosis, diphtheria, cholera, plague, and typhoid fever, Malta fever, malaria, and yellow fever. A particularly interesting chapter is that on the relations between Pasteur and Lister and the influence of the great Frenchman's work on that of the founder of modern surgery. The book, which is illustrated, is written in a clear and simple style, and gives one of the best accounts known to us of what modern medicine owes to the genius of Pasteur and to the science of bacteriology which he created. It further shows the vast possibilities of future developments that lie in his discoveries. There could be no better way of arousing an intelligent interest in the aims and methods of scientific medicine than the study of this book. We commend it to all intending to enter the profession as an excellent intellectual preparation for the work they will have to do. Even still more strongly do we commend it to the ordinary reader as a trustworthy exposition of the principles that are the foundation of sound doctrine in regard to the nature, prevention, and treatment of disease. No mind imbued with the teaching of Pasteur can ever be misled either by the gross pretensions of quackery or the more subtle sophistries that lead so many clever people astray when they dabble in medicine.

NOTES ON BOOKS.

MOTHERCRAFT.

THE preservation of infant life, already a pressing problem before the war, is likely to demand even more anxious attention in the near future, when the disastrous results to the nation of the wholesale slaughter of its manhood are more widely known and realized. The instruction of girls in the care and upbringing of children is therefore of the most vital importance to the country, and as time goes on there will be more and more need for the future mothers of the race to be fully equipped in every respect for the duty that lies before them. Attempts have already been made in different quarters to introduce lessons in mothercraft into the school curriculum; and Miss FLORENCE HORSPOOL has recently published a very useful handbook called *Mothercraft for Schoolgirls*,⁷ founded on a course of lectures already delivered with signal success to the girls of the elementary schools in Swansea. These lectures, which deal with the care of babies from their earliest days, are couched in the simplest language, and might well be taken as models of what such lectures should be. The book is illustrated with numerous photo-

⁶ *Pasteur and After Pasteur*. By Stephen Paget, F.R.C.S. Medical History Manuals. London: A. and C. Black. 1914. (Post 8vo, pp. 164; 8 illustrations. 3s. 6d. net.)

⁷ *Mothercraft for Schoolgirls*. By F. Horspool, L.O.S., C.R.S.I. With a preface by Lady Mond. London: Macmillan and Co. 1914. (Cr. 8vo, pp. 75; illustrated. 1s. net.)

graphs, and contains a preface by Lady Mond, at whose suggestion it was written.

The foundations of good health are laid in early childhood, but many mothers do not realize that the cornerstone of these foundations is in large part composed of the food they give to their children during the first years of life. Erroneous methods of feeding children are not exclusively confined to the class that sees no good reason why a young baby should not share the family dinner, and the most highly educated and conscientious parents are liable to make mistakes, which their children will find themselves called upon to expiate in later life. Those anxious to learn what a child ought and ought not to eat will find a guide, philosopher, and friend in Dr. JOHN LOVETT MORSE, whose book on the *Care and Feeding of Children*⁸ forms part of the series known as the Harvard Health Talks, besides dietaries suitable for children of varying ages. The volume contains advice as to their clothing, education, and general upbringing, and the treatment of infantile ailments.

Dr. CURGENVEN has prepared a second edition of his little book on *The Child's Diet*,⁹ which was first published some ten years ago. The author was among the first to give attention to a much neglected subject, and it is to be noted that in his preface he expresses the hope that before long measures may be taken by the legislature to ensure that the public are able to get a purer and cleaner milk. The new edition has been revised and somewhat enlarged, but its plan and purpose remain unaltered. It contains chapters on the feeding of infants and of children, on gastric catarrh (acute and chronic), on mastication, on constipation, in which liquid paraffin (a tablespoonful at bedtime for a child of 5) is recommended, and a classification of foods, diet tables at various ages, and a number of recipes.

It has been said that the rearing of the first child is always more or less of an experiment, and this must inevitably be the case so long as girls are allowed to marry knowing nothing of what will probably be their chief care and occupation during the early years of their married life. This ignorance, which is to be found amongst educated and uneducated mothers alike, has long been recognized as a serious menace to the future prosperity of the race. A series of lectures delivered last autumn under the auspices of the National Association for the Prevention of Infant Mortality at the Royal Society of Medicine and the Charing Cross Hospital Medical School has recently appeared in book form, and from *Mothercraft*¹⁰ the expectant mother may now learn how to avoid the mistakes which in past years have cost the State so many valuable lives. The subjects dealt with cover a wide range of ground, from the safeguarding of the baby's health before birth to the choice of a layette, and the lectures are characterized by their practical sense and their intimate knowledge and appreciation of the average mother's difficulties and needs. The list of contributors includes Dr. Amand Routh, Dr. Eric Pritchard, Dr. David Forsyth, and many others, and the book will prove invaluable not only to the mother herself but to the parish nurse, the health visitor, and to those attached to Infant Welfare Centres.

MEDICAL AND SURGICAL APPLIANCES.

Ventilated Elastic Stockings for Varicose Veins.

SIR MALCOLM MORRIS (London) writes: The medical profession will, I think, be glad to have their attention called to a ventilated stocking which I have recently been employing in cases of varicose veins associated with eczema. In these cases patients often complain bitterly of the almost intolerable itching provoked by the heat inseparable from the use of stockings of solid elastic. The substitution of perforated bandages is but a partial remedy for the drawback, the necessary overlapping of the folds of the bandage neutralizing to some extent the effect of the perforation. The intense irritation suffered in an exceptionally severe case of mine prompted me to consult Messrs. Maw Son and Sons as to the practicability of constructing an elastic stocking on the principle of cellular

⁸ *Harvard Health Talks: The Care and Feeding of Children*. By J. L. Morse, M.D. London, Toronto, Melbourne, and Bombay: H. Milford, Oxford University Press. 1914. (Fcap. 8vo, pp. 53. 2s. 6d. net.)

⁹ *The Child's Diet*. By J. Sadler Curgenvén, M.R.C.S., L.R.C.P. Second edition. 1914. London: H. K. Lewis. (Crown 8vo, pp. 115. Price 2s. 6d. net.)

¹⁰ *Mothercraft*. London: The National League for Physical Education and Improvement. 1915. (Cr. 8vo, pp. 250. 3s. net.)

clothing. The attempt was made, and made successfully, for I have tried the stocking in a number of appropriate cases, and have found that it admirably fulfils the desired purpose of affording support without heat. The stocking, composed of finely meshed silk and elastic, supports the distended veins not less effectually than does a stocking of solid elastic, while permitting free ventilation. For reasons which are obvious, in cases in which there is discharge it must not be applied until the exudation has ceased. Where economy is an important consideration, cotton can be substituted for the silk; and, whether made of the one material or of the other, the stocking can be employed with advantage in cases of uncomplicated varicose veins as well as those in which there is associated eczema.

A Waistcoat Pocket Medicine Case.

Messrs. Savory and Moore, 143, New Bond Street, W., ask us to call attention at the present time to their medicated gelatine lamels (or leaves), which they consider are particularly well adapted for personal use by officers in the present campaign. We do so with pleasure, because we judge them to be well fitted to meet the indication. A lamel measures about $3\frac{1}{2}$ in. by 2 in., and is divided into twenty four squares, each containing an ordinary therapeutic dose. Those sent to us range from tincture of ginger (10 minims) and extract of cascara (2 grains) to phenacetine (3 grains) and morphine hydrochloride ($\frac{1}{4}$ grain). The thickness of the lamels necessarily varies with the dose; the tincture of ginger is no thicker than a postage stamp, the phenacetine is necessarily more bulky. The lamels were first introduced some thirty years ago, and the manufacturers tell us—and we can well believe it—that whenever a war of any magnitude occurs the demand for them rapidly increases. Advantages claimed for them are that they are compact, and avoid the risks in war which must attend the carrying of glass bottles on the person. It is also easy to replace them, as a lamel can be sent by post. The firm also believes that they may be useful to officers of the R.A.M.C. for use in emergency in the trenches. The only weakness is that they are affected by damp, and to obviate this the little wallet in which the lamels are generally enclosed is provided with a waterproof case.

MEDICAL TREATMENT OF MEN IN THE NEW ARMIES.

As was stated a few weeks ago, we have received a certain number of letters from medical men in various parts of the country expressing the opinion that the medical arrangements for the treatment of at least the minor ailments of men in camp in this country were not in all places working satisfactorily. Some of the criticisms had reference to antityphoid inoculation, to vaccination against small-pox, and to the alleged difficulty in obtaining suitable drugs.

ANTITYPHOID INOCULATION.

With regard to the first point, antityphoid inoculation, it is clear that, if any carelessness exists, the officers guilty of it are acting in contravention of the very careful instructions issued by the War Office, as follows:

INSTRUCTIONS FOR CARRYING OUT INOCULATION AGAINST ENTERIC FEVER.

1. *Nature of the Vaccine.*

The vaccine consists of a sterilized culture of typhoid bacilli, to which a small amount of antiseptic has been added to guard against possible contamination after the phials or capsules have been opened. All the vaccine has been thoroughly tested for sterility before issue, and the dose determined by the various methods of standardization. Each capsule is *labelled*, the following particulars being entered on the label:

1. Serial number of the vaccine.
2. Date on which the sterility was determined.
3. Dose for an adult (in cubic centimetres and in minims) for "first" and "second inoculations."

2. *Form in which the Vaccine is Issued.*

In order to minimize waste, the vaccine is sent out in phials and capsules containing different quantities, the larger ones to be employed when a number of men are to be inoculated at one time, the smaller ones for single inoculations or for a few individuals.

In view of the labour involved in the preparation and

standardization of the vaccine, it is requested that every effort be made to economize it, as far as possible, by arranging for the simultaneous inoculation of groups of men by selecting phials whose contents correspond as nearly as possible to the number of doses required.

The vaccine is issued (a) in small glass capsules, containing single doses for first or second inoculations; (b) in sealed glass phials of 5 c.cm., 10 c.cm., and 30 c.cm. capacity. In all cases these capsules or phials *must be well shaken* before they are opened and their contents withdrawn for inoculation.

3. *Method of Drawing off the Vaccine into the Hypodermic Syringe.*

(a) *Method of Sterilizing the Syringe.*—The syringes used for inoculation are graduated in tenths of a cubic centimetre, and are of 5 c.cm. capacity. A scale is marked on the stem of the piston in tenths of a cubic centimetre, and by means of this scale and the travelling button which moves upon it, the requisite dose for each man may be accurately measured, or a whole-glass syringe of smaller size graduated either in minims or in tenths of a cubic centimetre may be used if preferred. The syringe is most easily and quickly sterilized by filling it with sweet oil which has been brought to a temperature of 160° C. The oil may be heated over a spirit lamp in any shallow vessel, and, if a Centigrade thermometer is not available, a small piece of breadcrumb may be placed in the oil and the point noted at which it begins to turn brown, which indicates, approximately, the desired temperature. It is well to fill and empty the syringe with the oil two or three times whilst the temperature of the oil is being raised, otherwise the sudden exposure to a temperature of 160° C. may crack the glass. The needle may either be fixed firmly on the syringe before sterilization, or may be dipped in the hot oil and subsequently adjusted with a pair of forceps.

The syringe must be allowed to cool before being filled with the vaccine.

(b) *To Fill the Syringe from the Glass Capsules or Phials.*—After shaking thoroughly, a mark may be scratched on the glass near the pointed end with a file; this end is then sterilized by holding it for a few seconds in the flame, and the tip then broken off by a tap or by means of sterile forceps or scissors. Now hold the sterilized syringe, needle upwards, and invert the capsule or phial over the point of the needle. The vaccine may now be drawn off aseptically into the syringe. When drawing out the piston of the syringe care must be taken to keep the point of the hypodermic needle continuously below the surface of the fluid in the capsule.

When the contents of the syringe have been used up and the syringe is to be refilled, the needle must be sterilized afresh by passing it through the flame or by dipping it in the hot oil. It is unnecessary to resterilize the syringe.

4. *Instructions as to the Method of Injecting the Vaccine.*

(a) *Choice of a Site for the Injection.*—With a view to diminishing the pain which is consequent upon serous effusion and facilitating the absorption of such serous effusion, it is advisable to inoculate into the outside of the arm at the level of the insertion of the deltoid muscle, or into the infraclavicular region.

These considerations are of especial importance in dealing with lymphatic persons, in whom a not inconsiderable amount of effusion is prone to occur.

(b) *Method of Making the Injection.*—The most convenient method of making the injection is to pick up a thick fold of skin between the finger and thumb, and then to pass the needle well down into the subcutaneous tissue in the centre of this fold.

The skin should previously be *sterilized* with antiseptic lotion, alcohol, and ether. If a series of men are being inoculated at the same time this may be entrusted to an assistant, while the operator confines his attention to the injections.

The needle of the syringe should be sterilized between each injection by dipping in hot oil.

5. *Dosage.*

As the result of experience it has been found that the best results, as regards development of protective substances in the blood, are obtained by dividing the dose of vaccine in two parts, one-third being given as a *first inoculation*, and the remaining two-thirds as a *second inoculation*, ten days after the first. The amount of vaccine constituting each of these doses is determined for each brew of vaccine, and is marked on every phial and bottle, both in cubic centimetres and in minims.

The inoculated should be given clearly to understand