been reported on the application of embryonic extracts to experimental wounds in laboratory animals and to indolent wounds in humans (Amorosi, Bergami, Bugliari, Carnot and Terris, Goldberg, Kiaer, Morosov and Striganova, Nakamura, Nielsen, Roulet, Schloss, Wallich, Waugh). In most cases favourable results were claimed.

It was therefore natural to determine by animal experiments whether cell-growth-promoting adult tissue extracts can also accelerate the course of wound healing. In 1944 Auerbach and Doljanski (*Brit. J. exp. Path.*, 1944, 25, 38) performed experiments on experimental wounds in rats treated by topical applications of saline heart extracts and alcohol precipitates therefrom, and on the basis of controlled experiments in 92 animals they stated: "Extracts of adult hearts when applied locally did not, thus, accelerate the course of healing of treated wounds as compared with control wounds in the same animal; they would even appear to cause a slight inhibition." In 1946 Young, Cruickshank, and Martin (*J. Path. Bact.*, 1946, 58, 63) reported similar results in rabbits.

The above observations do not settle the problem of promoting the wound healing *in vivo* by substances which activate cell multiplication *in vitro*. The possibility must be considered that the locally applied cell-growth-promoting extracts do exert an accelerating action on the rate at which the wounds heal. This acceleration, however, could not be perceived from a comparison with control wounds in the same animal, since the healing process in the latter, too, might be hastened by growth-stimulating substances absorbed from the wound surface and entering the circulation. To elucidate the question if the cell-growth-stimulating substances introduced parenterally can affect the process of repair of healthy wounds the following experiments were undertaken (*Proc. Soc. exp. Biol. N.Y.*, 1945, 58, 111). Thirty rats with experimental skin wounds received intraperitoneal injections of a saline extract of adult chicken heart, the injections being repeated every second day until the wounds closed. The rate of wound healing in animals treated in this way was compared with that of wounds of equal size in untreated rats. The experiment shows that the parenteral treatment with cell-growth-promoting extracts of adult hearts caused a significant reduction (21.8%) in the mean time required for healing as compared with the controls. These findings relate to rats only and are on a small scale, but they do indicate that the problem of the action of the cell-growth-promoting tissue extract on the process of normal wound healing is by no means settled and requires more intensive study.—I am, etc.,

Jerusalem.

L. DOLJANSKI.

Adaptation of E.M.S. Huts for Children's Wards

SIR,—I was much interested in Dr. Wilfrid Gaisford's and Mr. C. H. Elkins's plan for adaptation of E.M.S. huts for children's wards (Dec. 7, 1946, p. 867). The authors were good enough to refer to the plan for the same purpose prepared by my colleague, Mr. Coales, and myself and published in the *Monthly Bulletin* of the Ministry of Health (February, 1946), and I was grateful to them for quoting our remarks in favour of different methods of adaptation being explored. There are a great many of these huts in the country, and it is much to be desired that a number of people should exercise their ingenuity in devising different ways of adapting them and should make public the results of their efforts. Requirements differ and plans should differ with them. Stereotyping of hospital design is, above all, to be avoided, and, whether adaptation of existing buildings or designing of new buildings is in question, it is by pooling ideas and by experiment and discussion that we shall arrive at the best results.

It may be worth while to say a few words about the chief differences between the Gaisford-Elkins and the *Bulletin* plans. I have been so much struck by the poor quality of most of the hospital accommodation for children throughout the country that, when Mr. Coales and I came to the plan for children's wards in our hut adaptation series, we took the opportunity of trying to devise accommodation which should meet the special needs as well as could be done within the rigid framework at our disposal. Accordingly we thought it worth while to produce a rather elaborate plan involving quite a substantial amount of adaptation. Dr. Gaisford and Mr. Elkins, on the other hand, aimed at showing "how a typical E.M.S. hatted ward may be modified at reasonable

cost and with minimal structural alterations to accommodate infants and children in surroundings where the chances of cross-infection are lessened and other desiderata are provided." Both these lines of approach have their value. The essential differences between the two plans seem to me to be:

(1) The *Bulletin* plan provides a sluice room, a bathroom, and sanitary accommodation in a central position, while the Gaisford-Elkins plan has these conveniences at the end of the hut only.

(2) In the Gaisford-Elkins plan the single-bed cubicles open into the main ward and are approached only through it, while the *Bulletin* plan contains a series of entirely separate single-bed rooms opening into a corridor.

The advantages (as they seem to me) of the above-mentioned features of the *Bulletin* plan have to be weighed against the undoubted merit of economy in cost, labour, and materials of the Gaisford-Elkins plan. Of the two main points of difference (2) is much the more important. The risk of spread of infection in children's wards is never absent, and my personal opinion is that the *Bulletin* plan gives greater safety in this respect, sufficient to warrant the extra cost and use of labour and materials. Dr. Gaisford and Mr. Elkins, however, have evidently had in mind circumstances which, in their view, would make the degree of separation shown in their plan sufficient. It would be interesting to learn the opinions of others of your readers on this question.—I am, etc.,

Ministry of Health,
London, S.W.1.

T. S. McINTOSH.

The Filigree Operation for Hernia

SIR,—The note upon the filigree operation for hernia by Mr. D. M. Cooper (Feb. 1, p. 182) is valuable in that it brings into daylight a good method of hernia repair which has been obscured by a multitude of ingenious plastic manoeuvres for closing the inguinal canal. Many of the complications that he details in his paper appear to be hypothetical rather than probable.

Since the technique of Mr. Percival Cole was introduced at the Yeatman Hospital, Sherborne, by Dr. Richmond McIntosh about 15 years ago almost every inguinal hernia in adults operated upon by himself and by me has been treated by the filigree method. Out of some hundreds of cases, I know personally of only one case that has suppurated and one that relapsed; in the latter I did not find it difficult to dissect out the old filigree nor to make a bed for a new one. Post-operative pain has never been more severe than that experienced after the Bassini type of repair. No patients have complained of pain when moving about in bed, nor after leaving the hospital. Neither secondary haemorrhage nor faecal fistula has occurred. I am happy to subscribe myself as a humble disciple of Mr. Percival Cole.—I am, etc.,

Sherborne, Dorset.

JOHN WHITTINGDALE.

Health Service in Rhodesia

SIR,—As Director of Medical Services my attention has been drawn to the leading article (Nov. 23, 1946, p. 777) dealing very impartially with the health services in Rhodesia and more particularly with the recent National Health Commission's report. It is desirable, however, to contradict the last sentence of your article. This reads "the system whereby our voluntary hospitals are staffed by physicians and surgeons who give their services without payment . . . is quite out of the question in the Rhodesian scene."

On a point of fact, for more than twenty years the two larger hospitals in Salisbury and Bulawayo have had staffs of honorary physicians and surgeons who have given their services without payment. Furthermore, throughout the war these honorary consultants included in the scope of their work, and equally without payment, the medical and surgical care of all serving members of the Forces, whether Rhodesian or members of the Royal Air Force training in the Colony under the Empire Training Scheme. Several of these consultants each performed hundreds of operations, and the numbers of patients seen in consultation passed well into the thousands during the war years alone.—I am, etc.,

Salisbury, S. Rhodesia.

R. M. MORRIS,
Director of Medical Services.