from disintegration and families enabled once again to take their place as self-directing and self-respecting members of the community. Co-ordination of existing work and the co-operation of all agencies concerned with the problem are essential. The aim of F.S.U. is to provide a service at the disposal of other departments and bodies to be used by them on particular cases needing specialized treatment.

The committee plan first to take responsibility for the existing work in Liverpool and Manchester, and then to establish a new unit in London as soon as personnel becomes available. The keynote of successful work in this field must be friendship, and the work will call for personal self-sacrifice of a high order. The work of the committee will continue for some time to be experimental.

The problem family fails to utilize or benefit from such facilities for its betterment as exist at present. Rehousing, family allowances, and a national medical service are not enough. This is a task in which voluntary effort and personal service in the home must play a preponderant part, and it is a task in which personal service alone can be successful. Among the objects we have in view is a comprehensive investigation into the nature, extent, and causes of this form of social subnormality. A two years' period will, we think, be sufficient to establish the facts, and we ask for a sum of £15,000, which is sufficient to support the existing centres during that time and to establish one new centre in London.

Information will gladly be sent to anyone interested on application to the Secretary, Family Service Units, at 85, Clarendon Road, London, W.11. Donations will be gratefully acknowledged by the Honorary Treasurer, Lord Balfour of Burleigh, at Lloyds Bank, Limited, 71, Lombard Street, London, E.C.3. Signed on behalf of the National Committee.—We are, etc.,

D. BOWES LYON,
Chairman.

BALFOUR OF BURLEIGH,
Honorary Treasurer.

London, W.11.

Nylon for Buried Sutures

SIR,—For many years silver wire and silk-worm gut have been used to suture fractured patellas. Silk of various types and linen thread have been used for strength in ligature of main vessels and as suture material in hernias. Then the autogenous fascial graft was hailed as the best method of repairing large or recurrent hernias. Kangaroo tendon was used for a time, but one hears very little of it now. Thin silver wire, silk, and linen have been used for suturing the abdominal fascia in elderly or debilitated patients or those with a chronic cough, to give added strength and allow the patient to get up safely with a shorter time in forced reclining posture.

For the past two years I have been using nylon as a buried suture, and felt it worthy of an added word to what has already been written about it. I have used it extensively to suture the abdominal fascia in debilitated patients with weakened musculature, for the mid-line incision in abdomino-perineal excisions for carcinoma of the rectum, in upper abdominal operations where a long incision is necessary, etc. I have also used it in direct, recurrent, and large inguinal hernias and in incisional hernias as a filigree mattress, first doing an ordinary repair with stout catgut and then making an interwoven mat of nylon without tension. So far, I am pleased to say, it has proved extremely satisfactory and has produced no ill effects except that some patients have noticed a small hard lump in the scar where the knot is made.

Comparing it with silk or linen it is more difficult to knot securely, but so far there has been no trouble should sepsis occur, which has often made it necessary to remove silk or linen from the wound weeks, or even months, later. One patient who required an extensive bowel resection and was very debilitated had marked sepsis, and the skin wound broke down on the eighth day. The nylon in the abdominal fascia was visible in the wound and we feared the worst, but the sepsis cleared up, the nylon held firm, and the wound healed over it by rapid granulation. Compared with fascial graft it is easier to suture with, it shortens the operation, avoids the damage to the fascia lata, and appears to be equally efficient. Compared with fine silver wire it is less rigid, easier to knot, and, I think, equally efficient.

Nylon has been found a very suitable material for buried sutures. I do not think it useful as a ligature for main vessels, as it might cut through the wall and is difficult to tie securely. It withstands sepsis without maintaining or prolonging it. It can be used for continuous suture or as a reinforcement filigree. I would be pleased to hear of the results of others who have tried it.—I am, etc.,

Tonbridge, Kent.

N. R. HOUSTON.

Surgical Aspects of Roundworm Disease

SIR,—Capt. F. Barber's article (Jan. 11, p. 49) under this heading interested me as I dealt with a case in 1934 in which the surgical aspects were definite and urgent. The two cases on which Capt. Barber operated leave some doubt as to the connexion between the worm infestation and the surgical lesion. The removal of some of the worms by incising the intestine and milking them towards the opening is difficult to justify.

My case was a girl aged 9 years with classical symptoms and signs of acute appendicitis of obstructive type. On laparotomy a curious picture presented itself. The caecum and most of the small intestine were crowded with roundworms. The appendix and its mesentery had undergone torsion, and the whole length of the appendix was black but not oedematous—indicating that the arterial and venous circulations had been interrupted simultaneously. The cause of the torsion was the peregrination of a baffled roundworm after its adventurous head had reached the distal end of the appendix. The proximal half of the worm was extracted from the caecum as the appendix was removed, the stump being ligatured and buried *secundum artem*. Recovery was uneventful, and anthelmintic treatment resulted in the passage of a satisfying number of roundworms.—I am, etc.,

J. F. E. GILLAM.

Surgical Treatment of Chronic Frontal Sinusitis

SIR,—Like Mr. V. E. Negus (Jan. 25, p. 135) I am a strong advocate of the external operation for chronic frontal sinusitis, and the procedure that he suggests is almost identical with the method that I described 25 years ago and have practised ever since. I think, however, that he dismisses somewhat too lightly the possibility of cure by intranasal means. There are many cases in which the outflow through the fronto-nasal duct is hindered, in addition to those mentioned by him, by groups of cells massed round and impinging on the duct itself. I agree that it is not possible to clear all the anterior ethmoidal cells by intranasal means, but the main mass can be dealt with safely and the way opened for the passage of graduated copper bougies into the sinus itself. These crush the high fronto-ethmoidal cells out of the way without damaging unduly the mucous membrane of the duct. When the largest bougie that the bony ring guarding the floor of the sinus can take has been passed, it will be found that in many cases adequate drainage is assured.

The failure of the operations of Max Halle, Ingals, and others is due to the fact that the way into the frontal sinus is cut or rasped, with consequent formation of exuberant granulations from the raw surface, the formation of new bone, and subsequent stenosis. The "bougieing" of the fronto-nasal duct is not altogether easy, but with an appreciation of the anatomical disposition and a development of the tactile sense a considerable measure of success may be looked for.—I am, etc.,

London, W.1.

WALTER HOWARTH.

Acceleration of Wound Healing

SIR,—In the annotation "Acceleration of Wound Healing" (Oct. 12, 1946, p. 548) you refer to work on the effect of tissue extracts on wound healing. It has been known for a long time that embryonic extracts accelerate the growth of cells *in vitro*, and it was further found that extracts of adult tissue were very effective in this respect—i.e., the substances capable of stimulating cell multiplication *in vitro* are not limited to proliferating tissues but are also present in stable, mitotically inactive tissues (Carrel, Walton, Trowell, and Willmer; Doljanski and collaborators). Numerous experiments have

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.