popular amongst female nurses owing to the physical strain involved; because off-duty times fluctuate; and because so many trained staff are lost by marriage.

On the other hand, in some of the smaller hospitals there is a wastage of what trained staff there is, owing to there not being sufficient surgical work fully to occupy its time. This wastage and expense could in some part be overcome by use of travelling theatre units based upon a large central hospital.

The usual training for theatre work consists of three months as a probationer and a further three months as a staff nurse before a nurse is considered to be of any real value.

Although I understand that the question of theatre staffing is being reviewed by the Ministry, the present policy is to employ nurses. It is probable that most would agree that all nurses should have some theatre training, but is it necessary that trained theatre staff should consist of registered nurses at all? It would seem reasonable to suppose that male technicians could be used instead. Given an "O" level of education it should be possible to train theatre technicians in six months. The employment of such men would have the advantage that they would be better able to withstand the physical strain; that if a shift system were worked off-duty times would be secured; that for the technical part of theatre work men are probably better equipped than women and there would be less loss through marriage.

Some surgeons prefer to have nurses assisting them at the operating table, but perhaps this preference could be offset against a probable reduction in the length of the list of those awaiting operation.—I am, etc.,

Topsham, Devon.

F. E. GRAHAM-BONNALIE.

Postgraduate Medical Education

SIR,—Dr. P. G. Isaacson (January 12, p. 119) must have been most unfortunate. He would have found at this regional board hospital weekly medical and surgical "grand rounds," weekly rounds, and demonstrations in wards or laboratories for local general practitioners, fortnightly clinicopathological conferences, monthly clinical paediatric meetings, and necropsies carried out to very high standards, with histology of the main organs and lesions performed routinely. Regular medical and surgical tutorials are held for those working for higher degrees. The hospital library is open to anyone wishing to read journals or textbooks there. Meetings of regional and occasionally national bodies take place here. The laboratory staff do some research and publish papers. As for criticism—we all get some of that.

This hospital, Sir, is by no means unique in this region; all the larger hospitals and most of the small ones could offer far more to Dr. Isaacson than he found in his "London hospital with over 300 beds."—I am, etc.,

Little Bromwich General Hospital,
Birmingham 9.

T. H. FLEWETT.

"Plantaris Rupture"

SIR,—I would like to endorse Mr. R. C. Howard's opinion concerning rupture of the tendo Achillis (January 12, p. 118). I agree with him that rupture of the plantaris tendon is a myth: I have never encountered a rupture of this tendon and I agree with Mr. Howard that one invariably finds it intact when operating on a

ruptured tendo Achillis. I also agree that the latter injury is very frequently missed: I feel sure that the reason for this is not so much the "plantaris myth" but the following: (a) not infrequently there is considerable swelling at the rupture site and so the gap in the tendo Achillis is not quite so obvious shortly after the injury as it is at a later stage; (b) the patient can actively plantar flex his ankle (using the tibialis posterior muscle, etc.) and by tilting over to the uninjured side he can stand on tiptoe.

Apart from feeling the gap in the ruptured tendon there is, in my experience, only one other infallible test of a ruptured tendo Achillis and that is the patient's inability to walk on tiptoe. This they can never do.

—I am, etc.,

Chislehurst, Kent.

R. H. V. HAFNER.

Cutaneous Striae

SIR,—Your leader "Cutaneous Striae" (December 29, p. 1738) makes available in concise form much of the current information about this problem. To make your coverage more complete two additional contributions of merit on this topic should be mentioned.

Dr. L. Poidevin in his "Striae Gravidarum"¹ reviews the obstetrical aspects of striae and suggests that there is no specific relation between skin stretch and the development of striae. Dr. G. Kachele in "The Embryogenesis of Ectopia Lentis"² suggests that there may be another causative factor for striae, in addition to the two mentioned in the final paragraph of your leader—namely, a congenital defect of elastic fibres. In his article Dr. Kachele described a non-obese 16-year-old boy with Marfan's syndrome in whom striae were a very prominent feature.—I am, etc.,

GEORGE X. TRIMBLE.

Memorial Hospital of Long Beach,
Long Beach 6, California, U.S.A.

REFERENCES

- ¹ Poidevin, L. O. S., *Lancet*, 1959, 2, 436.
- ² Kachele, G. E., *Arch. Ophthalmol.*, 1960, 64, 135.

A New Vaporizer

SIR,—I was most interested to read the annotation in your issue of November 17, 1962 (p. 1308), on the subject of poisonous air. This is the first time, I believe, that the factors relating to this most important cause of morbidity and mortality have been so clearly stated. The relationship between "smog" and bronchial conditions is now quite well known, but it still does not appear to be widely understood that, in addition to conditions endangering life, atmospheric pollution produces an impressive volume of minor illness.

The key words are contained in line 6 of your article: "when the weather is cold and calm." After some years in general practice it became evident that one could foretell an increase in the number of calls we would receive for ear and respiratory infections of major and minor degree simply by observing the weather. A series of cold, still evenings, when the smoke content of the atmosphere produces a blue halo around street lights, would produce an increasing volume of such infections. This set of circumstances happens repeatedly during the winter but is overshadowed by the more dramatic "black smogs."

I became particularly interested in this problem in 1957. Although, as far as I know, there was then no proof, from experience in a previous profession I was

becoming convinced that the oxides of sulphur and nitrogen played an important part in the damage done by "smog"; partly by the exacerbation of bronchospasm.

It occurred to me independently (although I now know that similar observations have been made before and since by others) that ammonia would neutralize these acid gases. Experiments in 1957 with ammonia solutions in conditions of heavy smog confirmed this view. However, ammonia solutions did not remain effective for long and I was searching for a substance which would liberate a trace of ammonia for weeks at a time so that not only smogs but also the nightly smoke pollution of bedrooms could be reduced.

A cheap and effective mixture was suggested by Mr. John Norton, M.P.S. The "prototype" vaporizer consisted of a 1 lb. jam jar containing an equal quantity of ammonium carbonate and ammonium bicarbonate covered by a few layers of gauze tied in position by fine string around the lip of the jar. A later model consists of a metal canister with a perforated top (like a sugar sifter) closed by a threaded cap which is discarded once the device is in position. The crude earlier model was, I think, more effective, as it allowed a freer escape of the gas. Both types remain effective for about two months.

Several hundred of these vaporizers have been used by patients in the past five years and it is of interest that many have been bought by those not on my list, being introduced to the device by those who are.

Patients are given a duplicated sheet of instructions regarding the use of the device, which should be placed on the floor under the main window of the room to be "treated." A faint odour of ammonia can be detected and the vaporizer appears to be more active in smoky or smoggy conditions. It should remain in position during the winter months and not only during obviously polluted conditions.

Apart from the obvious use during "smog" it has been reported to me that benefit has been obtained in conditions which may be partly due to coal smoke from the atmosphere of the street seeping back into the room—for example, nasal discharge and interrupted sleep in babies; the dry night cough of children; recurrent otitis media and sinusitis occurring at any age.

This is, of course, a purely prophylactic measure and as such does not lend itself readily to controlled trials. It is, however, simple, cheap, and effective.—I am, etc.,

London N.W.2.

C. H. R. READ.

Experimental Medicine

SIR,—Since the appearance of your leading article on experimental medicine (October 27, p. 1108) I have received a number of communications from my colleagues urging me to call to your attention errors in fact upon which a part of the leader was based.

As Chairman of the Section of Clinical Testing of the Board for the Co-ordination of Malarial Studies in World War II, I wish to correct the statement that "four men died" in the course of malaria studies at Stateville Penitentiary, Joliet, Illinois. In point of fact, the Stateville experience consisted of studies during World War II amounting to the use of 400 volunteers with no deaths attributable to the experimental experience. Since that time, Dr. Alving tells me his post-war experience continues this good record and extends the number of volunteers studied by an additional 4,000 and no permanent injury.

I am enclosing copies of comments on the editorial for your information. The individuals and their relationship to the malaria studies are: Dr. Alf S. Alving, Head,

Malaria Research Unit, Department of Medicine, University of Chicago, Illinois; Mr. Joseph E. Ragen, Former Warden, currently Director of Stateville Penitentiary, Joliet, Illinois; Mr. Frank J. Pate, Warden, Stateville Penitentiary, Joliet, Illinois.

Please be assured that in bringing this matter to your attention I am solely interested in correcting the record and helping to obviate the possibility of secondary quotation which would tend to lend authenticity to a seeming misquotation in a popular publication.—I am, etc.,

Bethesda 14, Md., U.S.A.

JAMES A. SHANNON,
Director,
National Institutes of Health.

** As in our files we could find no rebuttal of the statement made in the *Daily Express* of August 8, 1949, in which Mr. Joseph E. Ragen is quoted as saying that four men had died in experimental studies on malaria, we assumed it was true, as it seemed unlikely that a reporter would invent such a statement. However, we are glad to be assured that the statement is incorrect and that there have been no deaths among the criminals in the Stateville Penitentiary, Joliet, as a result of the testing of remedies for malaria.—ED., *B.M.J.*

Biography of Sir Harold Gillies

SIR,—With the help of his widow and family, I am writing a biography of Sir Harold Gillies. I should be glad to hear from any of your readers who have personal recollections of him or who can supply other relevant information.—I am, etc.,

Flat 2,
39 Welbeck Street,
London W.1

REGINALD POUND.

Found

SIR,—A paraffin block labelled 62/2927 (MINTERN) in a wooden slide box bearing one of our labels (partly obliterated) has been returned by the G.P.O. in Dundee as being found loose in the post on December 31, 1962. For all I know, this may be very valuable. If the owner would like it returned perhaps he would apply to Dr. C. F. Ross, Woking and Chertsey Group Laboratory, St. Peter's Hospital, Chertsey, Surrey, and I would be glad to send it to him.—I am, etc.,

Chertsey, Surrey.

C. F. ROSS.

POINTS FROM LETTERS

Grains of Salt

Dr. R. B. WOODD-WALKER (London W.2) writes: In the modern rush to appear even more accurate than our rivals and predecessors we are in danger of becoming ridiculous. It is better and more correct to express one case in a series of nine as about 10% and not as 11.1%. The advice to your questioner who is considering making his pool of about 40,000 gallons into normal saline is expressed to the nearest 100 grammes (0.0061415% !), an accuracy which, I suggest, should be taken *cum grano*.

Below the Chlorides

Dr. H. GILBERT-CARTER (Dawlish, Devon) writes: Allow me to point out to your correspondent (December 8, p. 1542) that the dots above the second o in oöphorohysterectomy are a diaeresis—not an umlaut.

Emergency Resuscitation

Dr. J. R. MILES (Cheltenham) writes: In the excellent article on emergency resuscitation (December 15, p. 1564) the little man in the pictures looked so busy that I cannot help posing the old question: *Quis resuscitabit ipsos resuscitatores?*