A major poet had suddenly declared himself with incomparable verse, and none knew this better than Keats himself. So, soon afterwards, the young surgeon took his decision, deserting one vocation for another. His place as a surgeon could be filled by someone else; none could have replaced him as a poet. The three brief creative years followed, marred by the necessity of nursing his younger brother, Tom, who was dying of tuberculosis. In February 1820 Keats knew that he himself was doomed.

The final year was one of almost unbroken tragedy for the poet's tortured spirit. The intensity of his love for Fanny Brawne gave him more unhappiness than satisfaction. He had been deeply wounded by the cruelty of the critics in the quarterly magazines, and finally the fruitless journey to Italy, made while his pulmonary disease was rapidly tightening its grip, only intensified his sufferings. Today, a visit to the house on the Spanish Steps in Rome where the poet died, followed by a pilgrimage to the Protestant cemetery to read on his tombstone his anguish. His place as a poet

Carminatives

In the latest edition of the British National Formulary, published in 1968, several mixtures containing carminatives are still coyly present, but the word carminative does not appear in the index. They are among the last drugs to remain in the formulary that were mentioned by Pliny and Hippocrates. It is almost certain that these few mixtures do not meet the demand, and that in some form or another they are widely prescribed by doctors for patients complaining of wind and widely bought by mothers for their bawling infants.

What are carminatives? They are volatile oils usually of vegetable extraction and their names have an old-world ring: cardamon, dill, ginger, peppermint, cinnamon, and cloves. They are usually available as alcoholic solutions (tinctures) and prescribed in mixtures.

Do they work? Beyond a shadow of doubt. Anyone who has taken one and every worker who has investigated them confirm their swift and universal action. An almost immediate sensation of warmth develops in the epigastrum, and a belch usually follows within a few minutes. Viewed down a gastroscope the mucosa is seen to blish and become red soon after the introduction of a carminative. Measured by oesophageal pressures, reflux from stomach to esophagus is almost invariably recorded. Science supports common sense; carminatives do bring up gastric wind.

How do carminatives work? Some years ago B. Creamer suggested that the increased mucosal turgor rendered the cardia incompetent by disturbing the mucosal rosette. However, earlier work by pharmacologists on in-vitro muscle strips and isolated sphincters had shown a relaxing effect on the gastro-oesophageal sphincter (and also on the ileo-caecal sphincter). Now C. J. Sigmund and E. F. McNally have reinvestigated the problem in man using the more recently discovered knowledge about the gastro-oesophageal sphincter.

This can be delineated by pressure measurements and be shown to relax for about eight seconds on swallowing. They first primed the stomach by injecting 400–600 ml. of air and then introduced 15 drops of essence of peppermint suspended in 30 ml. of water. The gastro-oesophageal sphincter relaxed in 23 of 27 persons as shown by a fall of pressure. This fall began within one to seven minutes and the duration of the relaxation averaged 28 seconds. The pressure change of reflux into the oesophagus was recorded during this time. It therefore seems acceptable to regard the action of carminatives as causing a brief relaxation of the sphincter. It would be naïve to think that the gastro-oesophageal sphincter is the only mechanism of competence at the cardia; the tube valve effect of the intra-abdominal oesophagus is at least equally important. How this is affected by carminatives is unknown. No one has yet investigated that well-known habit spasm of the fully fed—the chin tucked in, the suppressed half-hiccup accompanied by a sharp blow on the sternum. Perhaps there is still room for further investigation.

Not many drugs have stood the test of time so well. Carminatives are useful, pleasant, and appear to be without side-effect. They are intuitively used as seasonings and in liqueurs with good reason. Their action may even explain why certain foods can cause heartburn—for instance, onions and garlic contain carminatives. They well deserve their precarious foothold in the Formulary.

Second Heart Sound in Pulmonary Hypertension

Critical analysis of the second heart sound has long been recognized to be of diagnostic value, particularly in some forms of congenital heart disease. Now G. Sutton, A. Harris, and A. Leatham have reported useful studies of one of the aspects of the subject on which information was sparse—the effect of pulmonary hypertension upon the second sound in various forms of heart disease.

Sutton and his colleagues studied 116 patients, and two main findings emerged from their work, though as so often happens in cardiology the exceptions to the rules add to their complexity. Firstly, an abnormally loud pulmonary component of the second heart sound, equalling or exceeding that of the aortic component in the pulmonary area and clearly transmitted to the mitral area, is strongly suggestive of pulmonary hypertension. Exceptions to this rule include healthy children, some patients with mitral regurgitation, and patients with atrial septal defect, in whom the characteristics of the second heart sound are the same whether or not pulmonary hypertension is present. Furthermore, not all patients with pulmonary hypertension have a loud pulmonary component to the second sound.

Secondly, pulmonary hypertension does not usually modify the degree of splitting of the second heart sound found in the underlying condition. Thus physiological splitting in mitral stenosis and a tendency to wide splitting in mitral regurgita-
tion are relatively uninfluenced by associated pulmonary hypertension. Wide, fixed splitting of the second heart sound is one of the hallmarks of uncomplicated arterial septal defect, and the nature of the splitting is relatively unaltered by pulmonary hypertension. In patent ductus arteriosus splitting of the second heart sound is physiological (though often difficult to recognize through the continuous murmur); associated pulmonary hypertension does not usually modify the splitting, though occasionally so-called reversed splitting may occur.

The two conditions in which the degree of splitting may be altered by pulmonary hypertension are ventricular septal defect and primary pulmonary hypertension. Ventricular septal defect with pulmonary hypertension and a left-to-right shunt usually shows physiological splitting of the second heart sound; with a high pulmonary vascular resistance, however, and reversal of the shunt, the second heart sound becomes single. In primary pulmonary hypertension, especially in the obstructive group due to thromboembolism, wide splitting of the second heart sound, not closing on expiration, is frequently found.

Though all doctors should be able broadly to interpret auscultatory findings, the stethoscope being part of every physician's stock-in-trade, the nuances of detailed analysis of the second heart sound in difficult cases may require the practised ear of the specialist cardiologist—especially when splitting of the second sound has to be differentiated from other sounds in early diastole, including the opening snap and the early diastolic sound of constrictive pericarditis. Finally, it should never be forgotten that auscultation should not be interpreted in isolation; the history and the electrocardiographic and radiological findings are of equal significance, and together constitute a total picture on which the clinical diagnosis is based.

Complaints by Patients

One of the problems common to all State institutions is the provision of remedies for dissatisfied customers. The Green Paper suggested that the new area health boards should take over the function of executive councils and hospital boards in investigating complaints by patients. The Council on Tribunals, in its annual report published last week, suggested that substantial changes are needed in the executive council procedures and a radical revision should be made in the other parts of the service. These recommendations are based on the argument that any investigation conducted within an organization must be unsatisfactory unless it is "clearly seen to bring an independent mind to bear on the matter investigated."

Certainly independence is an essential feature of natural justice; but the Council on Tribunals seems to have missed the point of investigations within a service like the N.H.S. An examination of the results of complaints by patients about their general practitioners shows that many are dealt with informally and that in about 80% of cases no breach of regulations is found to have occurred. In most cases the complainant is satisfied by a sympathetic informal hearing and an explanation of the facts which had disturbed him. Some of the changes in service committees recommended by the Council on Tribunals have already been proposed by the General Medical Services Committee Subcommittee on Service Committees and Tribunal Regulations—legally qualified chairmen and larger areas, for example. The present system would lose its virtues of speed and informality if it was modified to satisfy the high standards of inquiry demanded by the law courts.

No member of the public is deprived of his rights by the present regulations. If he is dissatisfied by the investigation his complaint receives he can still sue his doctor or the hospital in the civil courts, and he can also complain to the General Medical Council. The medical profession has a long tradition of strict surveillance of the professional standards of its members.

Gonococci Insensitive to Penicillin

One of the factors in our failure to control the incidence of gonorrhoea has been attributed to the emergence of strains of gonococci which are relatively insensitive to penicillin. This was first reported in Great Britain by F. R. Curtis and A. E. Wilkinson and by J. E. Cradock-Watson, R. A. Shooter, and C. S. Nicol in 1957–8. Since then these strains have been found in many countries. They are insensitive rather than truly resistant. The least sensitive strains encountered in this country require only 0.5–1.0 μg per ml. penicillin for inhibition, a level which can be reached but not necessarily maintained by the dosages of penicillin used at present. It is a common finding that infections with strains needing more than 0.1 μg per ml. penicillin for inhibition in vitro often fail to respond clinically.

The most detailed study reported in Britain was carried out by a Medical Research Council working party in 1961 on 1,984 strains isolated in various parts of the country. This showed an overall incidence of insensitive strains of 13%, but it varied in different areas and also at different times in the same area. In London in 1957 some 19% of strains were classed as insensitive. C. S. Nicol and colleagues, reporting on 91 strains isolated from men in London in 1966, found 37% to be insensitive. Twenty-two of the patients were not cured by 600,000 units of procaine penicillin; 13 of these failures were thought to be due to relapse and 9 to reinfection.

Ten of the former and three of the latter group harboured insensitive strains. In a more recent survey of strains isolated from 435 patients before treatment in London in 1968–9 the incidence of strains needing 0.125 μg per ml. or more for inhibition was 20-5%.