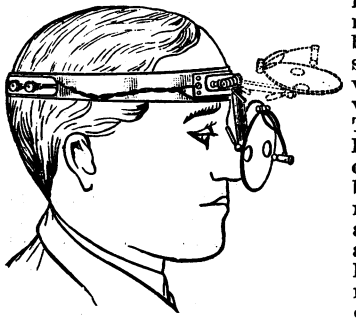
APPLIANCES AND PREPARATIONS.

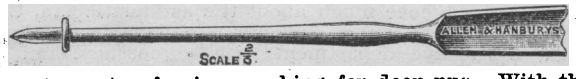
A Head Lamp.

MR. GILBERT CHUBB, F.R.C.S.Eng., Assistant Surgeon Throat Hospital, Golden Square, has devised a head lamp on the well known Klar principle, but with a reflector of speculum metal, so that it cannot break, and of sufficiently small size to allow of very useful peripheral vision when in place. The eyeholes are very large and placed on the converging lines for near binocular vision. The reflector is attached to a rigid headband by an arm with an adjustable hinge at either end, permitting of movement only in the sagittal plane. The lamp can thus be adjusted before washing up, and then brought down into place, or pushed away from the face, with a mop. An automatic switch cuts off the current when the reflector is out of use, thus enabling it to be used off a pocket battery without waste. The front part of the head-band is sloped back through 15 degrees, so that it lies flat on the forehead, and permits of the lamp being worn for long periods without discomfort. Mr. Chubb has found the lamp useful not only for ear, nose, and throat work, but also for many operations in general surgery where the general illumination available was insufficient. The lamp is made by Messrs. Mayer and Phelps.



A Tonsil Bayonet.

Mr. A. SCOTT GILLETT, F.R.C.S.Edin. (London, W.), writes: In opening peritonsillar abscesses it is usual to employ either a small scalpel guarded with strapping, or unguarded forceps. When employing the former method it is difficult to sterilize the strapping; in the latter it is



easy to go too far in searching for deep pus. With the idea of overcoming these two disadvantages Messrs. Allen and Hanburys have made for me the instrument here figured. The following advantages are claimed: (1) Ease of sterilization; (2) the presence of a collar, which prevents the operator stabbing too deeply; (3) the double-edged bayonet which facilitates the conversion of the stab into an incision in either an upward or downward direction. The operation can then be completed with blunt forceps quite safely. Messrs. Allen and Hanburys are the makers of the instrument.

Anti-Vermin Paste.

We have received from Captain C. G. MOOR, R.A.M.C.T., of the 1st London Sanitary Company, a sample of the anti-vermin paste which he devised in France towards the close of the war. Captain Moor is part author of an excellent little handbook on *Field Sanitation*, reviewed in our issue of February 9th, 1918, p. 177. His preparation was tested privately among their men by various medical officers, who reported very favourably on its effect both in destroying lice and preventing their approach. The novelty of this preparation lies in the fact that the active ingredient, naphthaline, is combined with the ointment, so that the user is constantly clothed in the vapour of naphthaline. In theory, at least, the British army is now free from body vermin, but in the terrible conditions of Eastern Europe louse-borne diseases (typhus and relapsing fever in particular) are rife, and there is therefore still a large field for anti-vermin measures. This paste is manufactured commercialiy by the Sanitas Company, Ltd., Locksley Street, Limehouse, E. It is sold in tins at 9d.

THE Faculty of Medicine of Liége University has arranged a vacation course in various branches of medicine, surgery, and obstetrics, from March 29th to April 10th.

THE activities of the Italian Section of the International Association "Pneumothorax artificialis," suspended during the war, have been resumed. It is now inviting the enrolment of new members, who should communicate with Professor U. Carpi of Lugaro. The Association proposes to revive the international review, *Pneumothorax Thérapeutique*, which, under the direction of Carlo Fortanini, contained a collection of the world's literature on artificial pneumothorax.

THE MENTALLY DEFECTIVE AND THE UNSTABLE BROUGHT BEFORE THE COURTS:

*THE BIRMINGHAM SCHEME.**

BY

W. A. POTTS, M.A., M.D.,

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IN considering this problem it is necessary to mention two outstanding facts of criminology. The first is that in England it was found recently that out of 168,260 convictions, 104,171, or 62 per cent., of the persons convicted had received at least one previous conviction, while 12,133, or over 7 per cent., had been convicted about twenty times previously; of the 11,000 odd convictions for more serious offences tried at the assizes and quarter sessions, 70 per cent. had been previously convicted. The other fundamental fact is that "practically all confirmed criminals begin their careers in childhood or early life." The late Dr. Goring proved that between 15 and 20 is the age for recruiting into the criminal classes.

These facts show that prison is not a remedy for this social disease. It can scarcely be expected that imprisonment would do much good, because, at the best, prison means discipline without training, and takes no account of the initial cause of wrong-doing. If by chance the cause is discovered, no steps are taken as a rule to deal with it; for justice, as we call it, can only deal with the offence for which the prisoner is charged, and therefore does not punish him for his initial fault, which is frequently something quite different from the charge the court is considering. For instance, women who are charged with petty thefts are often inebriates; to punish them for stealing does no good; in fact, it makes them worse. Dealing with them satisfactorily as inebriates would cure their drinking habits, and their thieving propensities would then right themselves. Some people steal because they are lazy and play truant from work, but stealing is not the fundamental fault. Punishment for stealing, therefore, only makes them more degenerate, especially as it develops an anti-social grudge. Dealing with the laziness by medical treatment, if it is due to constitutional disease or weakness, or by a labour colony and training in high ideals if it is a moral weakness, might effect some good. Frequently lying is the fundamental cause of going wrong, and is the fault that should be punished, or rather dealt with.

The investigations of the Royal Commission on the Care and Control of the Feeble-minded, and many other investigations, have shown that a considerable proportion of prisoners—a percentage varying from 10 to 30—are mentally defective, and should be dealt with as such, and not as criminals. Careful examination will show that physical illness and incapacity are the cause in another large percentage of cases. In addition to this there are, as frequent causes, wrong occupations, want of training for any occupation, bad homes, and alcoholism. It might be objected that alcoholism has no place in the production of criminals, as most are developed at 16 or 18 years of age; hereditary weakness, however, is often seen in children of alcoholic parents, while bad homes are more often due to drink than any other single cause. Venereal disease is important. Sometimes it poisons the mentality, and is a cause of crime, or at least a contributory factor. Whether it is the cause of crime or not, many prisoners will be found to be infected; their disease should be treated. This is not always done, sometimes because the disease is not diagnosed, but more often because the term in prison is too short for effective treatment. Often the presence of such disease untreated is only another sign of mental defect. The National Council for Combating Venereal Disease finds mental defectives one of its great difficulties; such persons often spread disease broadcast. In them untreated venereal disease should be accepted as a proof of "neglect," thereby bringing them under the Mental Deficiency Act (1913). There would seem to be no reason

* Being a paper read at a Conference on the Administration of the Mental Deficiency Act, 1913, in the Church House, Westminster, in November, 1919.

why this should not be done, but it would be well to amend the Act to this effect.

Some of the disabilities I have described are dealt with by the Borstal system, the Probation of Offenders Act, and the Children's Court, but all these will fail time after time if there is no scientific investigation into the real cause of the crime. This has been recognized for several years by the Birmingham justices, who have realized that many mental defectives must have passed unnoticed through the courts. More recently these justices became concerned at the prospect of the discharge of a number of soldiers suffering from shell shock, and the probable effect of alcohol on them and other weaklings when released from the strict discipline of the army. The Birmingham justices decided to initiate a scheme which will probably be taken as a model for the administration of justice all over the country.

The essential feature of the Birmingham scheme is that every prisoner in whose case there is any possibility of such an explanation of the crime as I have suggested, or who in any other way is unlikely to be benefited by imprisonment or fine, should be examined by an expert medical investigator, either before or after conviction, but in any case before sentence is passed. The report of this investigator is taken into consideration before sentence. In a number of cases the prisoner is placed on probation and the treatment suggested by the medical investigator made a condition of the probation. The Probation of Offenders Act has given great power to the justices; if wisely used in this way, great benefit will follow. Many cases are found to be mentally defective; this was so with three out of the first sixteen dealt with, although the Mental Deficiency Act was already being energetically administered in Birmingham; such cases are handed over to the Committee for the Care of the Mentally Defective, which usually deals with them by placing them in a suitable institution. It has been realized that without additional legislation, but merely by making proper use of the Mental Deficiency Act, much good can be accomplished. An important part of the scheme is the provision of a staff of wise and sympathetic probation officers; much depends on them.

It is not possible to find the real cause by any investigation in court. One often hears magistrates asking a prisoner what is the reason of his going wrong; in a public court it is very unlikely that the prisoner will state what is the cause even if he realizes it himself. In the majority of cases the cause can only be elicited after long and careful examination and a private interview. The springs of conduct are in the subconscious mind, and therefore often unsuspected by the individual himself; their discovery requires experience in mental analysis. Psychotherapy is often an important agent in effecting a cure. If only a proper investigation were carried out, the scandal would be avoided of the extraordinary police court notices to be seen in the paper every week, such as the statement that a boy of 9 was a confirmed criminal, and should be treated as such. Anyone who has studied the subject must know that the boy was either a moral defective to be dealt with under the Mental Deficiency Act, or else had never had a chance, and that if anyone required punishment it was not the boy but his parents. Recently the chairman of one bench said a girl of 16 "was well on the downward path, and the best place for her was prison." This was said after the probation officer had stated that "the girl had been in three homes, and had made a farce of probation arrangements." I cannot help thinking it might have been more correct to say that the court had made a farce of examining the girl, the probation arrangements having been made without any scientific investigation of the girl and her circumstances.

To make their scheme more effective the Birmingham justices induced the Home Office to appoint at the prison, instead of a part-time, a whole-time medical officer with a special knowledge of insanity and mental defect. This ensures cases overlooked before going to prison being recognized while under treatment. The justices have arranged as a matter of practical working that their medical officer shall be responsible for the examination and treatment of all cases outside the prison, while the prison medical officer shall be responsible for all those inside the prison, and that those two officers shall, whenever possible, work together, each calling in the other if he wishes the help of a colleague in coming to a decision. Everything I have described so far has been arranged and carried out in Birmingham without any additional legislation. The Birmingham justices are by no means satisfied even with this great improvement, but have extended their scheme so that a portion of the prison infirmary will be converted into a mental hospital, where special cases can be treated on the recommendation of either of the medical men engaged in this work. The prison medical officer is responsible for the treatment of all cases inside this hospital, but the medical adviser to the justices will have the right of entry and making suggestions in regard to all cases in which he is interested. This hospital will be outside the prison wall, and the stigma of prison will be eliminated. This scheme is on the right lines. As a medical man engaged in this work I may say that the only difficulty I have had so far is that some magistrates do not seem to realize in what a large percentage of cases special medical examination is desirable, if not absolutely necessary. So far no case has ever been put before me in which the proceedings can be regarded in any way as a waste of time. There is no doubt that it will turn out to be, in the long run, one of the most economical proceedings ever devised. If the enormous cost to the community be realized of one lifelong criminal and the degenerate descendants he or she may have in a few generations, it will be recognized that the expenditure of a pound or two at the outset may save the country thousands of pounds in the end.

The most important question is how magistrates are to recognize prisoners who ought to be referred for special examination. The cases that most urgently require dealing with in this way are those not understood and cases where the crime is of an unusual nature. There are many mental defectives in addition to those who are obviously mentally defective. A girl or young woman may be feeble-minded, although she smiles pleasantly and answers ordinary questions in an ordinary way. Sometimes mental defect is exhibited by lack of attention and interest in the proceedings in court. It is often shown by frequent change of situation and inability to earn a living wage for any length of time. Placing obstructions on a railway and incendiarism when there is nothing to gain from insurance always suggest the possibility of mental defect, and so should gross sexual offences. The physical conditions that should be referred for examination include all those that look ill. Serious defects of vision and speech are often precursors of crime, and so are severe headaches, which always require investigation. Puzzling cases, where there is no obvious reason for the crime, should be referred; in many of them surprisingly good results can be obtained if the prisoner is approached in the right way, thoroughly examined, and properly treated. By modern methods of investigation we can see the inner workings of the mind. Mental analysis and psycho-therapy have untold possibilities in many cases. Much can be accomplished by probation continued for a sufficient length of time under proper conditions.

In Birmingham we have been administering the Mental Deficiency Act (1913) for over five years. But of the first 16 cases specially examined for the justices, 6, or 37 per cent., were not responsible; 3, or 18 per cent., were not fully responsible; one was a doubtful case, and the remaining 6, or 37 per cent., although responsible, were entitled to special consideration owing to circumstances connected with their health, homes, occupations, or lack of training in anything good. Yet almost everywhere except in Birmingham these cases are still dealt with in the ordinary way. One young man convicted of stealing was found to be suffering from consumption which was poisoning his mentality; instead of being sent to prison he was, through the assistance of the medical officer of health, placed in a sanatorium. At the end of three months he was able to go home again, and was fortunate enough to obtain light work instead of the laborious and injurious occupation in which he had previously been engaged. He has now been at home several months, working well, and his conduct has been satisfactory in every way. Of the cases dealt with so far more than 18 per cent. have been found to be mentally defective, and have been dealt with under the Mental Deficiency Act, while over 12 per cent. have been of unsound mind and therefore equally irresponsible. Treatment under the Mental Deficiency Act involves considerable expense at first, but this is nothing compared with the amount incurred in keeping up large numbers of prisons, refuge homes, maternity homes, infirmaries, etc.

One man who came before the court was found to be suffering from shell shock, and was taken in charge by the military authorities, who placed him in a suitable hospital for treatment. Several other cases have been dealt with in a common-sense manner.

In order that a scheme such as that followed in Birmingham may be successful, it is essential to have an investigator who has some knowledge of mental defect, insanity, and psychotherapy. Above all he must be interested in the early signs of mental disease and not one who says there is no proof of mental disease till murder, suicide, or some other serious crime has been committed.

To show that the Birmingham scheme by no means encourages malingering or fails to set a proper example, I may cite the following case:

A young girl in regard to whom I reported to the magistrates that she was in poor physical health, and was also mentally dull and backward, although not actually mentally defective. In consequence of this disability she was entitled to all the consideration the court could give her. At the same time I stated that she was a member of a big family, and lived in a bad neighbourhood in the centre of the town; also, that one member of the family had already got into trouble. It seemed unlikely, therefore, that probation would be a suitable way of dealing with the case. The offence of stealing was a serious one, and had taken place in a large and important institution, where it was necessary to set an example. The magistrates devoted a great deal of time and consideration to the case, and asked me whether it would be more beneficial to the girl's physical and mental health to have the strict discipline and training of a special institution or to go home and live more or less undisciplined in the centre of a town. My opinion was that an institution would act better in her interest, especially as, having been dismissed from her employment, it was essential that she should be trained for some new occupation. In these circumstances the magistrates sent her for three years to a reformatory school.

The number of cases dealt with up to the present time is so small that I cannot give all the statistics and confirmation of the wisdom of the scheme I should like, but I feel justified in saying that every single case has been an object lesson in the value and necessity of work on these lines.

RETAIL PRICES OF DRUGS.

THE Standing Committee for the Investigation of Prices under the Profiteering Act, 1919, appointed a subcommittee some time ago to investigate prices, costs, and profits, at all stages, of drugs and medicinal tablets and preparations, proprietary and otherwise. The subcommittee, of which Dr. C. O. Hawthorne is the medical member, has recently presented an interim report,* in which it describes the system of production and distribution under which at the present day drugs and medicinal preparations are provided and supplied for the public use.

Wholesale and Retail Druggists.

From evidence taken by the subcommittee it appeared that drugs and medicinal preparations are in Great Britain mainly distributed by some 10,000 retail pharmacists; in addition, some of the stores in many large towns include a retail pharmacy in their organization. There are altogether 20,000 persons other than pharmacists licensed to sell "patent" medicines. Some manufacturers sell only or mainly to wholesale druggists, others also sell direct to retail pharmacists; there are also wholesale druggists who own retail shops. The business of a retail pharmacist, it is said, is in certain respects exceptional; the turnover, for instance, both in gross and in detail, is of very small monetary value and the business stock very varied in character. The subcommittee considers, therefore, that such a business cannot be treated, as regards rate of profit, on the same trade basis as businesses with a large turnover confined to comparatively few articles.

The methods of business adopted by the manufacturing firms are found to be different; some of them spend large sums in advertising; the public demand thus created compels the pharmacist to stock the articles, even though the percentage of profit allowed on them is small. Some firms spend little in propaganda, but indicate to the public selling prices which allow a relatively large percentage of profit to the retailers, and in return expect to be rewarded by a relatively large amount of preferential pushing of their products by the retailers. Other firms, still in an early stage, not only spend large sums on propaganda, with a view to securing a public demand for them, but also fix a selling price to the public which allows both wholesaler and retailer a comparatively large profit.

A Proprietary Articles Trade Association was formed in 1896, with the object of protecting the small retail pharmacist against price-cutting by the stores and others. This association now consists of three sections—proprietors, wholesale distributors, and retail distributors. Some 310 firms owning proprietary articles are members. It is governed by a council consisting of 36 members, equally divided between manufacturers, wholesalers, and retailers. It exercises control over the price of practically 3,000 proprietary articles sold by 310 manufacturing or owning firms and retailed by 20,000 or 30,000 retailers. It determines a fair rate of profit, which is usually (in terms of selling price) 12½ per cent. to the wholesaler and 25 per cent. to the retailer. Price-cutting is avoided by an agreement that any person selling any article on this association's list at a price lower than that fixed by it may be refused a supply of all articles included in the list. Without such a protective arrangement, it is said, the profit on many of the articles would probably be so small that the retailer would be disinclined to deal in them.

Aspirin (Acetylsalicylic Acid).

The subcommittee gave attention first to the cost of manufacturing and the selling price of aspirin and aspirin tablets. "Aspirin" is one of several trade names for acetylsalicylic acid, and before the war the name was the exclusive property of the Bayer Company, of Elberfeld, Germany, and could be applied only to the acetylsalicylic acid manufactured by that firm. After the outbreak of war certain British manufacturers began experiments, and during 1915 and 1916 several of them succeeded in manufacturing acetylsalicylic acid on a commercial scale. The German trade-mark having lapsed, British-made acetylsalicylic acid was placed on the market under various names, of which "aspirin" is the best known, and the subcommittee uses this term as the synonym for acetylsalicylic acid under whatever name it is sold. It is suggested that at the first opportunity the term should be included in the *British Pharmacopoeia* as a synonym for acetylsalicylic acid, which is already included. At present there is no official or pharmacopoeial definition of aspirin. Before the war the price of acetylsalicylic acid in bulk was about 2s. a lb., but the price of the Bayer aspirin was about 18s. a lb., less various discounts. After the outbreak of war the price of what was then being sold variously as aspirin or acetylsalicylic acid began to rise until in 1916 the price exceeded 40s. a lb. It afterwards declined until during 1919 the price in bulk ranged from 3s. 10d. to 4s. 6d. a lb.

One pound of aspirin represents approximately 1,400 tablets of 5 grains each. In 1914 a bottle containing 25 such tablets made of Bayer aspirin was sold retail at from 10d. to 1s. 3d., if containing tablets of acetylsalicylic acid at prices from 4½d. to 9d. In 1919 the retail price of a bottle containing 25 such tablets of acetylsalicylic acid, sold as aspirin, or under some similar name, varied from 5½d. to 1s. or thereabouts. The Government laboratory has ascertained that there is no substantial difference, either physical or chemical, between some seven aspirin tablets now on sale to the public, and that certain of the less expensive tablets are in no way inferior to their more expensive rivals.

The subcommittee concludes that under present conditions aspirin tablets made from acetylsalicylic acid answering the tests of the *British Pharmacopoeia* can, when working with large quantities, be manufactured and sold by the manufacturer with a reasonable profit at 5s. 6d. a dozen screw-capped bottles of 25 five-grain tablets in each bottle. It is stated that such bottles can at present be purchased by the public at certain shops at about 6d. each, a price which leaves a very narrow margin of profit to the retail pharmacist. The subcommittee finds, on the other hand, that the retail price of 1s. and upwards for 25 tablets, at which certain brands of aspirin are sold, is excessive in relation to the cost and manufacture, even when allowance is made for charges incurred in advertising and other methods of publicity. It is, however, of opinion that the present range of prices, when allowance is made for increased cost of labour, packing materials, etc., is not appreciably

*[Cmd. 633.] Price 1d.