

## THE INFLUENCE OF PARENTAL ALCOHOLISM ON THE PHYSIQUE AND ABILITY OF OFFSPRING.

A DISCUSSION on this subject took place at a meeting of the Society for the Study of Inebriety on January 10th. Letters of regret had been received from several gentlemen unable to be present, including Professor Karl Pearson, who wrote that pressure of other work prevented him from being present. But, failing this pressure, he did not think he would have attended the meeting of the Society for the Study of Inebriety, for, to judge by its journal and the tone of recent papers in it, its members did not seem to be occupied with scientific study.

The discussion was opened by Dr. T. B. HYSLOP, President of the Society, and late Resident Physician at Bethlem Royal Hospital, who spoke as follows:

In opening this discussion I am well aware of the difficulties in the task. The subject is, as you well know, one of very great importance, and it has been treated from so many and diverse points of view that to attempt to unravel the present tangle of criticism and doubt requires both courage and caution. In the first place it is necessary that the position of this society should be made clear. We profess to study. We have no axe to grind, no doctrine to disseminate, and no sermon to preach. We merely seek the truth, the whole truth, and nothing but the truth. It is by attacking problems from all sides that truth is ultimately reached, and even though discussions on alcohol are sometimes characterized by extravagances, the various personal conflicts do no harm so long as they do not obscure the matter discussed.

Unfortunately, or otherwise, the judicial mind is apt to be influenced when a pet hobby or intuition is in danger of being overthrown, and those who are so influenced most naturally warm to their work, and by every means available seek to protect what they consider to be the legitimate offspring of their reasoning faculties. Trouble is, however, apt to arise from the fact that these offspring are not always legitimate, and it is within the experience of all of us that we have cherished with tender care and solicitude ideas which time and advance in knowledge have ultimately proved to have been in reality delusions.

To-day we are faced with a problem of which our individual solutions have long been hugged to our breasts, to which we have given our faith, and which we have upheld without question. Like the post-impressionist in art, it now behoves us to divest ourselves for the time being of all our previous notions and beliefs, and to hark back, as far as possible, to the very beginning, and endeavour to rebuild on foundations which are really sound.

In answer to one of his critics, Herbert Spencer pointed out that it is easy for a child to make a hopeless tangle of a skein of silk, and doubtless it would be easy to accentuate the present condition of affairs with regard to the subject under discussion to-day. It will be better, however, if, instead of rending each other, we endeavour to acquire knowledge of such facts as may prove to be an adequate foundation for the reconstruction of an edifice by future investigators, and which shall stand the test of time.

We are in sympathy with the aims of the Eugenics Laboratory, although we do not approve of their statistical methods, and in our search for truths we ourselves sometimes also exceed the mark, and possibly we also provide material for the dissemination of doctrines which, after all, are based upon a mass of heterogeneous, and even incompatible, data, and which leave much scope for criticism and attack. Such being the case, I trust that by friendly collaboration we may be able to avail ourselves of the vast amount of earnest and painstaking work already accomplished by some of the best brains of the day.

### *The Problem Stated.*

I feel sure it is agreed that the problem we are met to discuss is not to be proved, or even advanced, by rhetoric, and, in my opinion, it is open to question whether it can be solved satisfactorily by statistics. Does parental alcoholism—apart from parental degeneracy, which, together with a tendency to alcoholism, is heritable—influence the physique and ability of offspring?

In order to answer this question, we must, so far as is possible, first eliminate such sources of error as are due to the inclusion of side-issues, indefiniteness of standards of alcoholism, health, and degeneracy, and we must correct our vague conceptions as to what really constitutes heredity. We ought also to equalize or exclude altogether such variations in environment as may possibly affect the germ-plasm of the parents or the offspring independent of the influence of alcohol itself. It is obvious, however, that it is wellnigh impossible to find a definite uniformity of phenomena on which to base statistics which shall be accurate in every particular. We cannot exclude all variations in environment, nor can we neglect the possibility of the intensification of degeneracy in successive generations due to a continuance of the same or different environmental defects.

In order to better define our standards of parental degeneracy and alcoholism, it is important to note the sex, age at incidence, and evidences of inheritance, as well as the nature and degree of the defect. Needless to say, the environmental conditions should also be carefully noted. So far as the parental degeneracy and alcoholism are concerned, the Galton Laboratory researches have served the very useful purpose of bringing again into prominence the *association*—in contradistinction to *causation*—of alcoholism and degeneration; but it must be confessed that the question as to which came first—the mental defect or the alcoholism—has not received such attention as is needed. As an asylum physician I am almost daily confronted with the difficulty of deciding, as to which is cause and which is effect, and if, after full consideration of all the data available, it is wellnigh impossible to decide such an apparently elementary point, how much more difficult must it be to find sufficiently reliable data on which to base statistics! It is also to be noted that the tendency to degeneracy or alcoholism may be latent in the parent, and one or other of these defects may become manifest, owing to some accidental factor, either before or after the tendency has been transmitted to the offspring. This fact renders the question as to which came first—the alcoholism or the child—somewhat futile.<sup>1</sup> At first I believed that parental alcoholism should invariably precede the birth of the child, but I have now come to see that such a stipulation would lead, not only to the suppression of half the truth, but even provide a source for error unless definite distinction were made between parental alcoholism *per se* and parental degeneration plus a psycho-neurotic tendency to alcoholism.

### *Alcoholism at Conception.*

The occurrence of conception at some festival season, when acute alcoholism is rife, has provided some investigators with data for consideration. The assertion that alcohol at festivals is the source of imbecility in offspring is as yet, however, unproven. Undoubtedly there may be an increase in the number of conceptions on such occasions, but I am not aware of any statistics which take into account the relationship of the alcohol to degeneracy in the parent, and the possibility of any ill results to the offspring being due to direct heredity has not, so far as I am aware, been adequately considered. In this connexion it must be noted that we know but little of the influences, alcoholic or otherwise, which determine conception; and, moreover, the parents are apt to shelve their responsibilities in such matters, and attribute defects in their offspring to some accidental or even fanciful cause. Certain it is that many of the poorer classes attribute the largeness of their families to the abuse of alcohol and the consequent loss of control and other considerations.

The earlier researches of Laitinen,<sup>2</sup> to which reference is made by the same observer in his Norman Kerr Lecture<sup>3</sup> and further contribution to the proceedings of the last International Congress on Alcoholism, have been very freely and exhaustively criticized by others. That he made no distinction between parents, one of whom drank, or both of whom drank, provides Professor Karl Pearson

<sup>1</sup> Any statistics which do not clearly differentiate between the two types of parental alcoholism and degeneracy are futile.

<sup>2</sup> Lecture delivered at the Anti-Alcohol Congress in Stockholm, 1907.

<sup>3</sup> See *British Journal of Inebriety*, October, 1909; and "Contribution to the Study of the Influence of Alcohol on the Degeneration of Human Offspring" (Proceedings of Twelfth International Congress on Alcoholism, 1909.)

and Miss Elderton with matter for self-congratulation, in that they themselves distinguished between the father and mother, and arrived at the conclusion that the drinking of the mother had more influence than the drinking of the father, and that, slight as was the effect, since it influenced girls more than it influenced boys, it was unlikely to have been due to toxic action on the fetus. That the latter observers carried their observations a few steps farther than did Professor Laitinen cannot be denied, but, needless to say, this fact does not in itself render their conclusions any the more valid. Laitinen's previous researches on the effects of small quantities of alcohol on animals, and the degeneration which he claimed to have found in their offspring would, if correct, appear to have more direct bearing on the subject, inasmuch as it is not probable that the offspring inherited a parental neurosis or psychosis to which the effects of alcohol had been added and transmitted as such to the offspring. For our purposes we must merely take note of Laitinen's statement that the number of young of those animals that received alcohol was somewhat larger, but much weaker, than in the case of the young of animals not treated with alcohol.<sup>4</sup> The truth of this statement will doubtless be fully investigated, and upon its verification much must necessarily depend.

#### *Parental Alcoholism and Degeneracy.*

For a long time past I have in many instances attributed mental and physical defects to parental alcoholism, but I must now confess that, after careful consideration of the data so much discussed by the members of the Eugenics Laboratory—also Sir Victor Horsley, Drs. Saleeby, Basil Price, Demme, Bezzola, Laitinen, MacNicholl, and many others—I have endeavoured to discard my previous conceptions, and I have sought diligently for an instance of defect which I could honestly convince myself as being due solely and entirely to parental alcoholism. Formerly I regarded epilepsy, some forms of insanity, mental enfeeblement and defective inhibition, deaf-mutism and stunted growth, as being mainly due to parental alcoholism. All these conditions, however, fall under the category of defects in what has been aptly termed the "general controlling determinant," and I have as the outcome of much clinical experience imagined I could diagnose parental alcoholism from the symptoms evidenced in the offspring. Now I feel that I cannot truly satisfy myself that in any one case there had not been also other factors than alcohol at work, and that the symptoms in the offspring might possibly have been due to the direct inheritance of a neuro-psychosis as well as alcohol.

It is obvious that instances of defective germ plasm in the stock—which may evidence itself by alcoholic tendencies throughout the stock—are instances of heredity pure and simple, and they ought, for the satisfactory solution of the problem before us, to be rigidly excluded. Such a process of exclusion, however, might result in the elucidation of but half the truth, and, as we shall see presently, in order to obtain the whole truth, the question does really involve the consideration of the degenerate and the problems of heredity.

The Eugenics Laboratory Memoir, No. X, did not profess to deal with the direct heredity of alcoholism. It concerned itself only with the offspring of the alcoholic as children.<sup>5</sup> Of the results that drinking produces in the offspring it is stated with a certain degree of truth that "alcoholism in the parent may, like insanity, be the somatic mark of a defective germ plasm in the stock. The child is defective not because the parent is alcoholic, but because it is the product, like the parent, of a defective germ plasm. The child may be physically and mentally fit, and yet, when adult, exhibit alcoholic tendencies."

Their contention does not include, or even refer to, the almost accepted assumption that alcoholism in the normal, as in the degenerate, parent is apt to lead to earlier alcoholism or degeneracy in the offspring. At present my experience leads me to the belief that parental alcoholism accentuates the downward trend, and with each successive generation the period of exemption from alcoholism and degeneracy is shortened, so that the offspring become alcoholic or degenerate at a relatively earlier age. Doubt-

less, however, this will form the subject for some future memoir, and possibly it may be ascertained whether parental alcoholism in the degenerate does or does not modify, diminish, or intensify the evidences of defective germ plasm in the stock—that is, does parental alcoholism alter the character or degree of the inherited degeneracy in the offspring? It would seem to me that alcohol as a complementary factor to parental degeneracy does aid in the devolution of the stock, and it is upon families which are prone to degeneracy that alcohol appears to put the finishing touches, and renders the physique and ability of the offspring more and more unsatisfactory with each successive generation.

Certain it is that Nature does not permit any prolonged departure from its laws of health and the trend of evolution, as shown by the tendencies for neuroses and psychoses to spread and ultimately wear themselves out in the course of time and with successive generations. This law holds good so long as other complicating factors, such as alcohol, do not add to the burden, and, by attacking the more or less attenuated neuroses or psychoses, keep them alight and thereby frustrate the efforts of Nature to render them abortive. Alcohol, as we all know, will readily set alight and determine the existence of a neurosis or psychosis which might otherwise be on the wane; and not only does it affect the individual and intensify his degeneracy, but it is also open to belief that it renders the offspring more liable to suffer from the transmission of such degeneracy, not only in its parental intensity, but also to be manifested at an earlier age in the progeny.

In the last report from the Galton Laboratory claim is made that alcoholism is, in its *pernicious* forms, consequent on, and not antecedent to, mental defect. This may be true, and, if rightly understood and supplemented by an account of the influence of alcohol in intensifying an already existing nervous defect, it can do no harm to the cause of temperance. That it is the aim of the previous memoir to prove that alcohol may be taken with impunity, no one with any sense of justice will contend; nor need it be imagined that alcohol is in any sense regarded as being capable of aiding the onward and upward trend of biological evolution. Referring as it does to pernicious forms of alcoholism, it is, of course, hardly likely to take cognizance of any statistics based upon the consumption of one glass of beer per day.

"One man's food another man's poison" refers to alcohol as much as it does to any other article of consumption, and it is indeed difficult to differentiate the degrees of alcoholism. Another matter about which there has been much contention, yet which has not yet been referred to in its true bearings, is the fact that in asylum practice it is comparatively seldom that we find the various lesions so common to alcoholism in the sane. The reason for this may possibly be that alcohol selects for attack the least stable of the bodily systems in a given individual. The system may be, by its inherent weakness, more susceptible to attack, or it may be less able to eliminate from its substance the effects of toxic action. Whichever way we look at the question, however, it must be conceded that the pathological findings in the insane are in favour of the Galton theorists, and it is difficult to conceive any explanation of the selective action of alcohol other than by the inherent weakness of the nervous system, as is found in inherited degeneracy.

It is impossible for me to deal with all the points at issue both with regard to parents and offspring and their environmental relations, so I conclude by stating that in my humble opinion it would serve our purpose best could we but find well defined and accurate instances in which defect in the child could be proved to be due to parental alcoholism without the aid of any other causal factor, such as degeneration or faulty environment. Until this can be done, and until we can multiply such instances, any statistics we may compile can only help us to make hazardous half-guesses, which may lead to misinterpretation and the spreading of doctrines and lines of action which may be for the good or ill of the community.

#### *General Conclusions.*

1. It is easy to make a tangle of a skein of silk, and nothing is easier than to employ destructive criticism to any theory which may be propounded in reference to the

<sup>4</sup> Hodge's results are even more striking.

<sup>5</sup> They never investigated the offspring, only offspring at the school age.

influence of parental alcoholism on the physique and ability of offspring.

2. The theory, briefly stated, ought to be, Does parental alcoholism (of a pernicious kind)—apart from parental degeneracy, which, together with a tendency to alcoholism, is hereditary—influence the physique and ability of offspring at any age?

3. It is practically impossible to exclude side-issues, variations in standards of health, alcoholism, and degeneracy from consideration, and we have as yet but imperfect conceptions as to what is meant by heredity. Hence we cannot obtain sufficiently accurate data for statistical purposes.

4. The *association*—in contradistinction to *causation*—of alcoholism and degeneration in the parent is insufficiently understood, and the difficulty in distinguishing between cause and effect, both in the parent and offspring, is so great that the decision must be frequently mere guesswork.

5. The present problem requires that parental alcoholism *per se* shall precede conception or the birth of the child; whereas, in the transmission of a psychoneurosis by direct inheritance, the parental alcoholic tendency may be latent, and not come into evidence until after the birth of the child. This necessitates complete differentiation between the two series.

6. Alcoholism would appear to be responsible for a relatively greater number of births than would health or degeneracy without alcoholism, and there appears to be some evidence, derived from experiments on animals treated by alcohol, that their young, although in greater number, were much weaker.

7. Epilepsy, some forms of insanity, defective inhibition and mental enfeeblement, deaf-mutism and stunted growth, although instances of what has been aptly termed the "general controlling determinant," and transmitted by direct heredity, are apt to be not only intensified in the offspring, but they make their appearance at a relatively earlier age, when parental alcoholism has been an additional factor.

8. Parental alcoholism does appear to accentuate the downward trend of inherited psychoneurosis, and with each successive generation the period of exemption from alcoholism and degeneracy becomes shortened, so that the offspring become alcoholic or degenerate at relatively earlier ages. Alcohol would in this way act as a complementary fact to parental degeneracy, and aid in the devolution of the stock.

9. The inheritance of a psychoneurosis (which would tend to diminish in severity with each successive generation, and with the introduction of new correcting influences through marriage) becomes intensified and prolonged when alcoholism becomes a complicating factor. In this way the psychoneurosis is kept alight through a greater number of generations.

10. The conclusions arrived at by the Galton Laboratory School of Eugenics and their critics deal with part only of the general question at issue, and when further investigations shall have demonstrated the influence of parental alcoholism on parental degeneracy, and the combined influence on the physique and ability of offspring, we shall be better able to speak with authority for the guidance of the community.

Sir VICTOR HORSLEY expressed regret that the discussion was evidently going to be one-sided, no representative of the Galton Laboratory being present, although several had been invited. The subject was, briefly, whether children suffered directly from the alcoholism *per se* of the parent, or suffered simply from a psychoneurosis. The scientific work which had already been done—at all events, until last May—all went to show that alcoholism in the parent was followed by adverse consequences in the offspring. But in May they were startled by the conclusions put forward by Professor Karl Pearson and Miss Elderton, showing on certain sociological and toxicological data that, socially speaking, the drinking workman was as good as the sober workman—earned as good wages, and had as good physique and mentality—and that the examination of children of school age showed them to be suffering from no poison that the parents had taken. After complaining of the "extraordinary courtesy" of the Galton Laboratory that in the controversy

which had lately been going on they should speak as if he (Sir Victor) were the sole protagonist, and should totally ignore the long labours of his colleague, Dr. Mary Sturge, the speaker reviewed the discussion which had been taking place in the BRITISH MEDICAL JOURNAL, and said that in the forthcoming issue Dr. Sturge and he were dealing with Professor Pearson's statistics and contentions in detail.\* He considered that the manipulation of the Edinburgh statistics was really a discredit to statistical science. With regard to alcoholism *per se* in the parent in its influence upon the children, for seven weeks past, by controversial letters in the BRITISH MEDICAL JOURNAL, they had been trying to extract certain simple facts from Professor Karl Pearson as to the incidence of parental alcoholism—that is, whether it came before or after the child—in the cases he quoted. Until they had those figures no one knew into what category to put the children. This week they asked him once more to give them the figures, and if he did not publish them at once the readers of the JOURNAL would form their own opinion upon the matter.

Dr. C. W. SALEEBY said it was of value that Dr. Hyslop should once again have distinguished between two fundamentally different things—namely, that which happened in the case where alcoholism was merely a symptom of degeneracy, and that which happened in a case where alcoholism was brought to bear upon a healthy stock. He (Dr. Saleeby) thought it desirable to consider the theory of blastophoria, and to distinguish sharply between acute blastophoria, by which was meant that the parent was alcoholized on the occasion of conception, so that there was alcohol in the seminal fluid, and the totally different condition of chronic blastophoria, in which the father on the occasion of conception might be entirely sober, although his germ plasma might be suffering from a degeneration in consequence of alcohol. This theory of blastophoria rendered it possible to draw a parallelism between alcohol and lead and arsenic. It was quite evident that a great many further inquiries would have to be made, and there was a great deal to be said for Dr. Hyslop's contention that the question could not be solved satisfactorily by statistics. He considered that Sir Victor Horsley had demolished the statistics of Professor Karl Pearson, but, still, the fact that Professor Pearson believed in them showed how many easy fallacies were involved in the statistical attempt to solve the problem. More experiments must be instituted upon animals. It was possible in animal experimentation to exclude so many factors that furnished a disturbing element in the human subject. Not only did degeneracy ensue more rapidly in animals, but it could be judged both by physical signs and also by whatever was the analogue of mental degeneracy in the lower animals. The experimental inquiry upon the lower animals in the case of lead, and also in the case of arsenic, had shown just what they asserted in the case of alcohol, and the same thing was probably true of phosphorus also, and, indeed, of all the toxic substances for which the placenta was not a filter.

Dr. W. C. SULLIVAN said that the main source of confusion of thought lay in the want of a clear understanding as to what was meant by alcoholism. Until quite recently—indeed, until last May—alcoholism was always taken to mean chronic alcoholism in the medical sense. The most cogent and demonstrative observations on this subject were those instances in which non-alcoholized individuals had had healthy children, and then, upon becoming alcoholic, had had unhealthy children. In Professor Karl Pearson's first memoir the parents were described as alcoholic when, in the opinion of the social workers, they were drinking more than was good for themselves or their homes. If that was not offered as chronic alcoholism, it was not pertinent to the writer's point; and, if it was offered as chronic alcoholism, then the authors of this memoir were prepared to believe that in an Edinburgh elementary school, and one specially selected for its widely representative character, the fathers of over 64 per cent., and the mothers of over 34 per cent., of the boys were suffering from chronic alcoholism. If any teetotal advocate in his wildest flights had made such an assertion he would have been regarded as a lunatic.

Among other speakers were Mr. RYLEY, who said that in his experience the male notion of the family seemed

\* See p. 74.

oftener to escape the inheritance of alcoholism than the female; Dr. CLAUDE TAYLOR, who thought that personal experience, even though it might be drawn from a much smaller area, was more valuable in such a matter as this than statistics, which only gave the position at a given moment; and Mr. THEODORE NIELD, who regretted that Dr. Hyslop had not endorsed more heartily the later work of Laitinen.

Canon HORSLEY referred to the exceptional opportunities of the parish priest in compiling observations upon this subject, particularly when he had worked among his people for a number of years. He had not found it difficult to ascertain the history of increasingly alcoholic parents and trace their increasing indulgence in the decreasing physique of their children. He noted particularly the increased instability and lack of self-control among the children of tipplers on arriving at puberty.

Dr. HYSLOP, in closing the discussion, said that he believed the majority of the medical profession did not really know what the problem was. A great debt of gratitude was owing to Sir Victor Horsley and Dr. Mary Sturge, who had prevented an undisputed acceptance of imperfectly-digested statistics and statistics founded upon wrong data. They had learned one thing—and he repeated it with all the emphasis of which he was capable—namely, that a person who had in his family the slightest predisposition to any psychoneurosis should never dare to touch alcohol. Alcohol in such a case would settle upon the nervous system and intensify and transmit the degeneracy. With regard to Professor Laitinen, he respected his work very much and he did not quarrel with his statistics. But he did not think that the time was ripe for the acceptance of all his data, and also that Professor Laitinen did not distinguish between a purely alcoholic parent and a parent who, in addition to being alcoholic, had also a degenerative tendency.

#### THE BOARD OF TRADE VISION TESTS.

WE are requested to publish the following letter. The committee referred to is that appointed by the President of the Board of Trade last year to inquire what degree of colour blindness or defective form-vision in persons holding responsible positions at sea causes them to be incompetent to discharge their duties; and to advise, whether any, and if so what, alterations are desirable in the Board of Trade sight tests at present in force for persons serving, or intending to serve, in the merchant service or in fishing vessels, or in the way in which those tests are applied.

The Institute of Physiology,  
University College,  
London,  
Jan. 3rd, 1911.

Sir,—I have been strongly advised to write to you with regard to the composition of the Colour Vision Committee appointed by the Board of Trade. Though the overwhelming majority of experts are on my side with regard to the extremely inefficient wool test used by the Board of Trade, not a single one of those who have been instrumental in bringing about the appointment of this committee is on it, whilst those who are definitely associated with the wool test very largely form its expert opinion. The president of the old committee that recommended the wool test is on the committee, and the secretary is a physician who employs the condemned method, and is a strong advocate of the wool test.

Twenty years ago I was appointed on the International Code of Signals Committee to advise the Board of Trade as to efficient tests for colour blindness. When the Committee of the Royal Society (which like the present committee had a large majority of physiologists, there being only one physiologist) recommended the Holmgren test, and that it was not necessary to have a medical man to test for vision and colour vision, my connexion with the Board of Trade ceased, my place being taken by a physician, the Secretary of the Committee. Therefore, for this obviously medical duty the Board of Trade does not employ a single medical man.

Colour blindness is a physiological subject, and a knowledge of physiology, psychology, and ophthalmology are necessary for its appreciation. One of the two physiologists appointed by the Board of Trade has, through illness, not been able to attend the meetings of the committee. I would suggest that the number of physiologists be made equal to the number of physicians.

I have done everything in my power to help the committee to come to a correct conclusion, and shall continue to do so. They have, however, made this very difficult for me, as I wished to make it a condition that I should be present when they examined any of my colour-blind cases, men who are able to pass the

Holmgren test. This they refused, so I withdrew the condition, but had they acceded this letter would never have been written.

I am, Sir,  
Faithfully yours,  
F. W. EDRIDGE-GREEN.

The President of the Board of Trade.

#### BRITISH MEDICAL BENEVOLENT FUND.

AT the December meeting of the committee twenty-seven cases were considered and grants amounting to £220 made to twenty-five of the applicants.

Appended are particulars of the cases relieved:

1. L.S.A., aged 60. Is temporarily incapacitated, and when helped earlier in the year was given leave to apply again in six months' time. Relieved once, £10. Voted £5.
2. M.R.C.S., L.R.C.P., aged 42. Is in ill health, and dependent on help from friends. Wife gives music lessons. One child, aged 8. Voted £5.
3. M.R.C.S., L.R.C.P., aged 47. Quite incapacitated and dependent on friends. No children. Voted £10.
4. Widow, aged 50, of M.R.C.S., L.S.A. Unprovided for at death of husband six months ago, and has been obliged to give up a post as companion on account of a nervous breakdown. No children. Voted £5.
5. Widow, aged 61, of M.R.C.S., L.S.A. Husband's savings were exhausted by a three years' illness preceding death, and applicant endeavours to support herself by taking boarders. Seven children, but one an invalid, and the others only just self-supporting. Voted £12.
6. Widow, aged 53, of L.R.C.P., L.R.C.S. Edin. No income; no children; lets lodgings. Voted £5.
7. Widow, aged 64, of M.R.C.S., L.S.A. Lost her husband a few months ago after a long illness, and is endeavouring to obtain resident patients or paying guests. Voted £6.
8. Daughter, aged 55, of late M.D. Aberd. Has supported herself until recently, but is now broken down in health. Voted £10.
9. Widow, aged 70, of M.R.C.S., L.R.C.P. Slight provision made by husband has to be supplemented by gifts from friends, and is quite inadequate for present unavoidable expenses due to illness. Voted £5.
10. Widow, aged 59, of M.R.C.S., L.S.A. No income, and has exhausted the proceeds of the sale of her furniture. Health very feeble. Relieved once, £16. Voted £10.
11. Widow, aged 75, of M.R.C.S. Dependent on an old age pension and occasional gifts from friends. Relieved twice, £24. Voted £12.
12. Widow, aged 69, of M.R.C.S. No income and dependent for a home on a son-in-law, who can ill afford to assist. Relieved once, £10. Voted £10.
13. Widow, aged 49, of M.R.C.S. Husband's means exhausted by a long illness ending in death, and applicant is endeavouring to establish a boarding-house. Relieved once, £10. Voted £10.
14. Widow, aged 52, of M.R.C.S. Nursed her husband for several years before his death, and is now herself incapacitated and a candidate for a pension from a home for incurables. Dependent on two sons whose earnings are very small. Relieved seven times, £92. Voted £10.
15. Widow, aged 51, of L.S.A. No income, and health too uncertain to attempt regular employment. Two daughters, aged 18 and 16, the latter having just obtained a post as governess. Relieved five times, £46. Voted £12.
16. Widow, aged 66, of L.R.C.P. Only income a few shillings a week from a house, if let. No children. Relieved eleven times, £126. Voted £12.
17. Widow, aged 75, of M.D. Glas. Endeavours to support herself by taking lodgers, but is unable to pay her rent, which is considerably overdue. Relieved seven times, £36. Voted £5.
18. Daughter, aged 64, of late M.D. Edin. Has supported herself for many years as a companion, but is now dependent on this Fund and another charitable society. Relieved six times, £72. Voted £12.
19. Daughter, aged 70, of late M.R.C.S., L.S.A. Takes boarders, but finds it impossible to make both ends meet, and is in arrears with her rent. Relieved three times, £20. Voted £10.
20. Widow, aged 54, of L.R.C.P., L.R.C.S. Edin. No income, and is in very bad health. Children only able to give slight help. Relieved four times, £48. Voted £12.
21. Widow, aged 66, of M.R.C.S. Receives a pension from Epsom College, and requires a little help in consequence of the unavoidable withdrawal of assistance by friends. Relieved six times, £54. Voted £10.
22. Widow, aged 65, of M.R.C.S. Dependent on the help of two relations and small profits from a boarder, if able to obtain one. No children. Relieved once, £6. Voted £6.
23. Widow, aged 65, of L.R.C.P., L.R.C.S. Edin. Has supported herself since husband's death several years ago, but is now crippled by rheumatoid arthritis, and dependent on a sister who is a teacher. Relieved once, £12. Voted £12.
24. Daughter, aged 63, of late M.D. Edin. Gave up a post as companion to nurse an elder sister, who is a permanent invalid and is dependent on this Fund and a small yearly grant from an old friend. Relieved five times, £60. Voted £12.
25. Daughter, aged 40, of late F.R.C.S. No income and