simply occluded by emboli. More recent investigations by the same observer have added to the probability that this explanation is a true one for certain kinds of aneurysm. Several other remarkable cases of embolism are to be seen in this appendix, and also some striking instances of occluded coronary arteries after death from angina.

We are informed that Mr. Pick, the present Curator of the Museum at St. George's Hospital, has added considerably to the collection since the manuscript of the printed catalogue was concluded; the histories of the cases being for the most part given along with the description of the specimens.

The introduction of the histories of the cases which we have above alluded to as forming a peculiar feature of the catalogue, could only have been possible where a system of registration of post-mortem records as perfect as that adopted at St. George's Hospital, has been long in use. The admirable series of yearly post-mortem books well indexed, in which the symptoms during life are in all cases recorded side by side with the appearances met with after death, extends as far back as the year 1840; and for its initiation the hospital has to thank Mr. Prescott Hewett, the present senior surgeon, who at that time was curator, and whose labours in the construction of the original catalogue of the museum are so well known to all students of the hospital.

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**Review X.**

*Tenth Annual Report of the General Board of Commissioners in Lunacy for Scotland.* Edinburgh, 1868. 8vo, pp. 250.

In the preceding number of this Review an analysis appeared of the last issued Report of the English Lunacy Commissioners, and it is now our duty to present a sketch of the condition of the insane, and of the prevalence of insanity in Scotland. The general Report of the Scottish Commissioners is chiefly occupied with statistical information relative to the numbers of the insane, their distribution, the provision made for them, and the circumstances affecting their condition. In conveying this information, numerous tables are introduced, and tabular statements also constitute a considerable portion of the appendices, showing the number of chargeable pauper lunatics in each county and parish of Scotland, how distributed, and the extent of population in each place. A further appendix is occupied with notes from the entries made by the Commissioners in the course of their visits to the several public and private asylums, and is
supplemented by general reports made by the Deputy Commissioners on the condition of single patients.

The first thing that strikes the reader is the precise knowledge possessed by the Scotch Commissioners respecting the number, distribution, and condition of the insane throughout Scotland, a feature that does not make itself apparent in the report of the English Board. The returns made of lunatics existing in Scotland on the 1st of January, 1867, show a total of 6762, of whom 3178 are males, and 3584 females. Of the total number 3519 were located in royal and district asylums, 672 in private institutions, 440 in parochial asylums, 558 in lunatic wards of poorhouses, and 1573 in private dwellings. At the same date there were in England, in public asylums and hospitals, and in private licensed houses, 31,917 lunatics. To this total must be added those detained in workhouses and those resident in private houses, two categories of patients of whom the English Commissioners have no sufficiently definite information to give. However, judging from the fact, that in 299 workhouses visited by them in the year, there were as many as 7987 persons of unsound mind detained in those institutions, we may fairly assume that, in all the workhouses together, there are half as many insane in existence as are provided for in the whole of the several public and private asylums in this country, a conclusion that must be astounding and most unsatisfactory to the English ratepayer, and to every man interested in the well-being of the insane, in the face of the enormous expenditure incurred in erecting and maintaining special asylums, supposed at one time or other to be adequate to the wants of the several counties and boroughs. The total of English lunatics should be further augmented by the addition of the number of such patients boarded out with strangers or resident in their own homes; of this number no approximative estimate can be made from the data supplied. In the case of paupers boarded out at the expense of parishes, returns might be obtained; but of patients maintained out of private resources, scattered up and down the country, and for the most part unknown to the Commissioners, no statistical information is attainable.

In Scotland the lunatic population increases at a lower rate relatively to population than in England. In the year 1867, 145 lunatics were added, the increase taking place entirely in the public asylums, an actual decrease being observable among patients otherwise disposed of. Hence, in fact, there was an increase in such public institutions of 312. Taking public and private asylums alone, for the sake of comparing the results with those given by the English Commission, the increase reached 171, in England it amounted to 1296.

Unlike what happened south of the Tweed, there was a decrease both of paying and of pauper patients in private houses, and of the
latter class also in the lunatic wards of workhouses. Nevertheless, the rate of accumulation is such, that "the demand for accommodation must speedily overtake the supply, unless constant additions be made to existing establishments, or new asylums continue to be erected." Further, the tables show, "that the accumulation in establishments goes on at a rate three times greater for pauper than for private patients... The recoveries are nearly in the same ratio in the two classes; but it appears that the proportion of private patients removed unrecovered from our registers is so much higher than that of pauper patients as to afford an explanation sufficient to account for the difference in the degree of accumulation of the two classes."

The Report proceeds to contrast these results with those arrived at by the English Commissioners:

"This difference (just noted) is a matter of so much practical importance that we may be excused for further illustrating it by reference to the Twenty-first Report of the English Commissioners in Lunacy:—Of 24,590 patients in the county and borough asylums of England at 1st of January, 1867, only 216 were private; on the other hand, of 6694 patients in hospitals and licensed houses, 5070 were private. In contrast, the number of patients discharged unrecovered from the county and borough asylums in 1866 was only 894, against 1106 similar discharges from the hospitals and licensed houses. The influence of this result on the accumulation of pauper patients in asylums is very remarkable. At 1st of January, 1866, the private patients in English asylums were 2831 males and 2445 females; and the pauper patients 11,299 males and 13,696 females. At 1st of January, 1867, the private patients were 2845 males and 2441 females; and the pauper patients 11,753 males and 14,245 females. There was thus, in 1866, an increase of only 10 patients, against an increase of 1003 pauper patients. The proportion of private to pauper patients, estimated on the numbers resident, was 1 to 5; whereas, their rate of increase was 1 to 100" (p. 6).

With respect to the relative proportion of the two sexes in asylums, it appears that male patients predominate, as in England, in point of number over female, in private establishments; whilst, in pauper institutions, it is the female inmates that are the more numerous. The returns of the census in 1861, and those of the proportion of male to female paupers made in 1867, in Scotland, would raise the expectation of a predominance of females both among private and pauper patients, and one decidedly larger among the latter.

As to the relative tendency of the two sexes to insanity, the Commissioners are of opinion, that the statistics of the numbers resident and of those admitted into asylums do not supply a safe criterion.

A table is presented of the number of pauper lunatics in 33 counties of Scotland, for each year since 1858, from which it
appears that in some counties, chiefly the small and agricultural, the number has decreased since 1858.

“In others there has been very little change; while, again, in others there has been a large increase. This increase, no doubt, bears a certain relation to the increase of population; but this cause will not afford a satisfactory explanation of the large growth of pauper lunacy in such counties as Aberdeen, Argyll, Kirkcudbright, and Wigtown. Nor will the recent erection of district asylums afford a solution of the difficulty! for, of the counties named, Argyll is the only one in which, since 1858, a new asylum has been provided” (p. 7).

At p. xii, these wide variations in the proportion of lunatics in different counties are attributed to differences (1), in the constitution of the inhabitants; (2), in education and mental culture; (3), in degrees of social intercourse, and in the amount and nature of their occupations; and (4) in their pecuniary position. “These discrepancies, however, are so various and manifold, as to render it difficult to maintain there is a greater extent of pauper lunacy among a manufacturing or agricultural population, or among people of Saxon or Celtic race.” And although the greater mental activity of an urban and manufacturing population may be assumed as predisposing to insanity, yet it must be remembered “that the increase of lunacy is found among the lower classes of the population, which neither in town nor country display much mental activity, but which are more exposed in urban and manufacturing, than in pastoral and agricultural communities, to overcrowding, impure air, exhausting labour, insufficient diet, abuse of stimulants, and contagious diseases.” Again, “over-excitement of the intellect or feelings is doubtless a not infrequent cause of insanity; but among the pauper lunatics who are admitted into asylums, the cases which originate in this source are few in comparison with those which are due to physical deterioration” (p. xiv).

The mortality in Scotch asylums will compare favorably with that in English and French establishments. The average mortality for five years was, in Scotland, on the two sexes together, 8·24, and in England 10·39 per cent. In France, on an average of fourteen years, the mortality reached 14·03 per cent. The death-rate of males exceeds that of females in each of the three countries named, but the relative excess is less pronounced in Scotland than in England or in France.

The Scottish Commissioners have not in their returns ventured to draw a distinction between idiots and lunatics, as they are satisfied of the fallacy of attempts to do so; and, by way of illustration, cite the returns made to the Poor-Law Board respectively by the parochial authorities of St. Pancras, and by those of Bedfordshire at large,
which represent only 7 idiots in the London parish with 9532 chargeable paupers, and as many as 108 among the 8841 paupers of Bedfordshire.

In Argyllshire the accumulation of lunatics has to a particular degree embarrassed the county authorities; and in April, 1867, they proposed to the Commissioners to be allowed to place incurable and harmless lunatics in the ordinary wards of poorhouses. This application had the advantage of being in accord with the admitted practice in English workhouses, and with the expressed views of the English Lunacy Board. However, the Commissioners "reluctantly came to the conclusion, that it was an inadvisable" proposition, though "they saw no insuperable obstacle to the establishment of lunatic wards in the poorhouses of Oban and Lochgilphead."

Overcrowding is the great fault in the Edinburgh asylum, and this institution is declared to "already exceed the limit compatible with efficient management; while the extent of land, amounting to about forty acres, is quite insufficient for the proper occupation and exercise even of the present numbers" (p. xxvi).

We shall not attempt to follow seriatim the remarks entered by the Commissioners respecting the state of the several asylums, licensed houses and parochial wards, and of their insane inmates; suffice it to say, they represent on the whole a favorable condition of things both with regard to patients and to the accommodation provided, the exceptions to this being almost all found in the licensed houses.

Dipsomaniacs claim a brief notice. Seventeen such morally aberrant beings availed themselves of the privilege accorded them by the Lunacy Amendment Act of 1866, and voluntarily placed themselves under control and treatment. Of these, fourteen were admitted into public, and three into private asylums. "The chief impediment (observe the Commissioners) to the success of special institutions for dipsomaniacs is, the want of the power of compulsory detention." At the same time, they do not see the way in which such power can be extended.

The Medical Act and the labours of the Medical Council have not succeeded, as far as Scotland is concerned, in securing for registered practitioners the recognition of the validity of their right to exercise their profession in any part of the United Kingdom. For, in the case of lunatics removed to Scotland, the certificates of the English medical men are held to be invalid for their detention in that (foreign?) land, and consequently certificates from Scotch practitioners are required. We cannot perceive any sufficient reason for this practice, but look upon it as an anomaly that ought forthwith to be abolished as opposed to the intent of the Medical Act.

The remarkable difference observed in Scotland between the ratio of discharges of pauper and of private patients, challenges the
attention of the Commissioners, who, without examining in detail the several causes assignable for such diversity, direct their observations particularly to the statutory provisions for the discharge of patients. By the 29 and 30 Vict. c. 51, the sheriff's order for the detention of a patient lapses at the expiry of three years, and it is incumbent on medical superintendents at the termination of the first three years to certify to the necessity of prolonged detention, in order that the detention may be valid, and to repeat annually a like certificate addressed to the sheriff, in order to obtain his authority for the seclusion of the patient the succeeding year. The intervention here of the magistrate is, in the opinion of the Commissioners, supererogatory; and the assimilation of the proceedings in Scotland with those in England is advocated.

Respecting the discharge of patients from asylums, the Report goes on to say—

"In determining on the propriety of the discharge of a patient, whether private or pauper, it appears to us that, as a rule, superintendents of asylums give comparatively little consideration to the question whether detention continues to be necessary or proper, provided they are satisfied that the patient is still of unsound mind. But the statutory form of the medical certificates requires not only that the patient must be of unsound mind, but also 'a proper person to be detained and taken care of.' It thus appears that the practical power of detention which is placed in the hands of a superintendent is very great, and is liable to abuse, if not exercised with judgment and discretion. Viewed even in the most favorable light, detention in an asylum partakes a good deal of the character of imprisonment. There is a necessity to conform to the rules of the institution, to sacrifice individual inclinations, and to obey the orders of the officials and attendants."

These remarks are weighty, and in harmony with a growing public conviction that there is too much imprisonment of the insane; that the disposal of a lunatic in an asylum is of the character of a final act, a throwing off of all further responsibility about him, a somewhat meritorious deed, inasmuch as it offers a permanent provision for his wants during the remainder of his days.

The deficiency in the means of bathing was remarked upon in English asylums, but it is surpassed in the like institutions in Scotland. We read of six or eight individuals being bathed in the same water, of twelve or fifteen males using a general bath at the same time; of the water being changed only twice for about forty patients. Moreover, there appears a general inferiority of Scottish as contrasted with English asylums in their internal fittings, in their indoor means for recreation, in the possession of books and periodicals, and in general in those particulars which, to use a favorite word with the writer of the Reports, contribute to the "amenity" of those establishments.
The reports by the two Deputy Commissioners, in Appendix F, present many points of interest. They refer to the condition of single patients, and it is pleasing to note a progressive improvement in that matter.

"As regards a large number of them, indeed, the state in which they are now found may be regarded as satisfactory. In comparison with what existed before 1858, the begging, ragged, henspeekie village fool is now rarely seen in Scotland. I hear (says Dr. Mitchell) this change often remarked upon, and it has been effected without placing in asylums inoffensive imbeciles, who were capable of enjoying family life and freedom, and to whom the discipline of an asylum would have proved irksome and a form of unnecessary restraint. When such patients are provided with judicious guardianship, plenty of plain wholesome food, a comfortable bed, and warm, well-made clothing, they are often so changed as no longer to attract attention either by their appearance or their habits. But besides this, the consideration which is seen to be bestowed upon them by persons in authority, is not without its good influence on the general community, who are thus led to reflect on the nature of the claims which the infirm in mind have on our sympathies. And thus arises a healthful change of feeling and conduct, which must be ultimately an advantage to the insane generally." (P. 228.)

Dr. Paterson seizes an opportunity to correct a misapprehension which the English Lunacy Commissioners have fallen into regarding the Scottish system of boarding out single cases. They remarked that the plan of boarding out harmless and incurable imbeciles in private houses, as carried out in Scotland, was inapplicable to the circumstances of pauper lunatics in England. They farther stated, that there are already 6600 residing as single patients, whom it is the duty of the parochial medical officer to visit and report upon at stated periods, and any of whom may be removed to asylums, if there is reason to suppose that they are neglected or improperly treated.

"Now (writes Dr. Paterson), if it were to be inferred that in Scotland the class of single patients is in a great measure kept up and recruited by the practice of drafting them out of asylums into private houses, under the care of parties unconnected with them by the ties of natural affection and duty; or that the superintendence and control exercised over them is substantially the same in the two divisions of the kingdom, such an inference would be considerably wide of the mark."

The fact is, that the majority live with their own relatives, and not more than 17 per cent. have ever been in asylums.

"The great majority have been simply allowed to remain where we found them, . . . . on our being satisfied that the arrangement
was a suitable one, or capable of being made so; and at least 86 per cent. consist of idiotic and demented persons, for whom asylum treatment would have been unsuitable or unnecessary. . . . . The real advantage which the Scotch system can lay claim to in its mode of dealing with single patients, and which is essentially favorable to its still further development, appears to me to consist not so much in the fact of the residence of a certain proportion of pauper lunatics with their own families or with strangers, as in the necessity for the sanction of the Board of Lunacy being given in each case before such residence can be permitted, and in the visits which it is the duty of parochial medical officers and inspectors of poor to pay to the patients at regular periods, being supplemented by those of accredited representatives of the Board of Lunacy, who are charged to inquire into the sufficiency of the guardianship, allowances, clothing, and general accommodation, and on whose unfavorable report the sanction may be withdrawn and the patients sent to an asylum.” (P. 241.)

Another feature belonging to the Scotch system of boarding out patients, which is likely to undergo considerable development, is that of granting licenses, free of charge, by the Board to house-holders for the reception of lunatics not exceeding four in number. In the generality of cases the license is restricted as yet to two patients.

"The character of the applicant, and suitableness of the house, are duly inquired into by the Board before granting the license; and the sanction of the Board, founded on a medical certificate of the patient's fitness to be placed in a special licensed house is further required in each case. Rules and regulations for the conduct and management of the house are also enforced,"

and visitations periodically made by the members of the Board.

In connection with this subject of patients boarded out, it is worth while to notice that the rate of mortality among those so placed is less than among the inmates of asylums and of lunatic wards.

"That it should be less than the mortality among asylum patients is not surprising, considering the amount of active disease in such establishments; but that it should be so considerably less than what occurs in lunatic wards of poorhouses must appear remarkable, especially when it is taken into account that the patients in such wards are, for the most part, like those in private dwellings, idiots and dments; and that, as a rule, the physical wants of the former are more amply supplied. We can offer no explanation of this fact beyond the conjecture that the manner of living in private dwellings, involving, as a rule, greater freedom and greater variety, more than counterbalances the advantages which better diet, better clothing, better bedding, better housing, and greater cleanliness, might be supposed to convey."
In the above quotations and remarks, we have brought under review some of the important results and problems to be met with in this excellent report from the Board of Commissioners in Lunacy for Scotland. It is one great social problem of the day, how are the unsound in mind to be best provided for, at the least cost to the public, commensurate with the best interests of the unfortunate individuals concerned. The system of aggregation has been fully tested and is found wanting. Gigantic asylums are gigantic evils and undoubted mistakes. The questions for solution remain; how far can the principle of distributing, maintaining, and supervising patients in their cottage homes, and in small licensed houses, be extended? Is it necessary to collect together and to shut up in expensive asylums all the crazy and weakminded members of the community?

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**Review XI.**

*Principles of Human Physiology, &c.* By W. Carpenter, M.D. Edited by H. Power, M.B., F.R.C.S. Seventh Edition. London, 1869. Pp. 1032.

Dr. Carpenter's writings have so long been the accepted standard works on physiology in this country that, in taking up the new edition of his 'Principles of Human Physiology,' we seem to be reviewing rather the progress and position of the science of physiology in England than discussing the merits of a particular treatise on this subject. This may be said notwithstanding the fact that Dr. Carpenter no longer takes any part in the compilation of the work, and does not even exercise the slight supervision over it he gave to the last edition, but leaves the responsibility entirely with the present editor.

When, after an interval of ten years, the sixth edition appeared it was at once recognised that in Mr. Power Dr. Carpenter had been so fortunate as to find a successor competent in all respects to carry on his work. Ten years leave an enormous gap in a science advancing so rapidly as physiology, but almost all the discoveries which had been made, and all the facts of importance which had been established, had been appropriated; the vast stores of scientific literature, foreign, and especially German, as well as English, had been swept, and the results carefully sifted, combined with such older views as had stood the test of time, into a complete and harmonious system.

Five years have barely passed and another edition has been called for. An author is usually considered to have done all that