Beyond the above it is not easy to go in recommending instruments for household music, though I have known not entirely unsuccessful experiments made outside these limits, by adding, namely, a small side-drum, of a quality just above a toy, for a boy, and castanets for a girl, in a family where older members played piano, violin, flute, and violoncello. But this was chiefly for the sake of the little ones, was confined to light music, and involved the exercise of a little knowledge of the art of "arranging" music for a band. This done, there were few prettier sights than the drawing-room band, with its drummer-boy of nine, and girl of eight with the castanets.

J. CROWDY.

CURIOUS FORMS OF FORGETFULNESS.

BY J. MORTIMER GRANVILLE, M.D.

STORIES are told, and true stories too, of persons who have forgotten their own names, and the names and faces of their most intimate friends, who could not recollect places with which they had long previously been familiar, or words commencing with a particular letter, or numbers including a certain figure; who had no remembrance of languages they once read and spoke habitually. When these curious forms of forgetfulness can be attributed to a serious injury, such as a fall, or blow on the head, or a wound received in battle, the exceptional nature of the cause seems to render the alleged consequence barely, but just, credible; but when no such cause is discoverable it is difficult to believe that partial losses of memory so sharply defined and particular as these are possible; in any case they appear inexplicable. And yet partial or limited defects in the brain-records of information or experience are more intelligible than those general deprivations of the faculty of recollection, which are of more common occurrence, and ought therefore to be easily comprehensible.

The facts are these: the brain, which is the organ of the mind, is composed of nerve cells and fibres, the latter serving to communicate, and the former being endowed with the power of receiving and recording, the impressions produced by external objects through the senses, together with such conceptions of impression as are evolved in the course of the operations of thought. No intellectual function is performed, or sensation experienced or imagined—in short, nothing takes place in the mind or within the range of the perceptive faculties—without a *physical* change in the minute structure or organism of the brain; and the physical changes so produced are the records which form the bases of memory. We may compare these records to the markings left on the tin foil by the needle of the phonograph, or to the characteristic forms in which the constituent particles of different substances arrange themselves in the act of crystallisation. Use whatsoever illustration we may, the fact to recognise is that some change takes place, and that a certain immeasurably minute portion—a molecule or a series of molecules—of the brain is cast in a special form by every act of brain function; and, being so left, remains the register or record of the impression, the thought, or the impulse by which it was produced.

Two obvious inferences result from this explanation, which we may just note in passing. First, there must be a limit to the brain-work possible in a lifetime. The mass of available molecules may be inconceivably vast, but it is certain that a period will arrive when every page, so to say, will be occupied, and then the brain will neither take in nor give out anything new. Secondly, no thought, or word, or feeling can be unimportant or without its influence on the mind and character, because it leaves an indelible record behind. There is this peculiarity about the conformation of living organic tissues—the shape, or arrangement, or the change whatever it may be, that takes place in action and remains as a record, is final. The mark on the tin foil of the phonograph may be obliterated, but the new shape or character given to the brain molecule by work of any kind is like the form and vitality given to a seed. It is henceforth a living germ of a new species called into existence by the mental act. When, in the course of that change which takes place in every region of the body in the processes of decay and nutrition, the elements of the organic cell or molecule are changed, the new material will be cast in the same shape as the old, and be endowed with the same qualities. More than this, as family likeness is perpetuated from parent to child, the brain with its characteristic properties will be reproduced, at least so far as to give an inherited bias to the mind of posterity. It is in this way mental constitutions are transmitted, and tendencies to the commission of crime or the practice of virtues, special powers of work or particular incompetencies and neuroses, are transmitted. It is easy to see that the process of mental recording or brain fashioning and educating must be of the highest moment to the individual and to the species, and that great responsibility must attend its control. The way these considerations bear on the subject of memory will be apparent. A record exists, although the power of recollection depends on the ability to find it when wanted. It is not difficult to understand that certain tracts or series of the records of memory may be destroyed by disease, or for the time blighted, as the growth and structure of a plant may be blighted by a frost and recover after an interval; or we can fancy that in some way portions

of the brain may by some physical circumstance, perhaps connected with the blood supply or the free course of nervous currents, be thrown out of the circuit of energy for awhile, and suddenly rekindled into activity. It is more easy to understand that any of these accidents or defects should produce partial losses of memory, than that the power of recollection should as a whole dwindle away and leave the records of memory intact but inaccessible. This is why I said at the outset that particular and, so to say, local forgetfulness is more easily comprehensible than a general deprivation of the power to remember.

Nevertheless, it cannot well be that the hypothesis of limited injury to brain tissue, and the destruction or blighting, or even the temporary isolation, of certain tracts or series of records, explains the curious forms of forgetfulness in which we are now interested. It is so unlikely as to be an unreasonable conjecture, that some eclectic force should traverse the whole register and blot out or injure the records of names only, or of faces, places, or particular figures! This is inconceivable, and we are justified in concluding that the defect must exist in the faculty that finds and reproduces the records rather than in the records themselves. In truth this finding-faculty is the principal offender in the great majority of cases of bad or failing memory. Much of our forgetfulness is due to the neglect of proper care in recording the facts we desire to remember. They are like mislaid articles in the external world. We did not notice where we placed them, and if we find them it will be by accident. When, therefore, forgetfulness occurs as a new fault in the character, it is generally the finder which is at fault. Record-finding, or re-collecting, is a process which requires for its efficient performance a thorough acquaintance with the contents of the register as a whole and its general arrangement; if there be no orderly arrangement, the whole burden of the work will be thrown on the finding-faculty, which will need to be a Remembrancer indeed! A skilful use of the power, and a sound method, of associating ideas, together constitute the basis of an orderly arrangement of the treasures of memory; and the power ought to be cultivated, and the method carefully and patiently developed. To insure this, the record-finding faculty should have a sufficiently clear knowledge of what it is looking for. It is necessary to form a habit of "taking stock," and closely inspecting the records of memory.

People seldom bestow a thought on their treasures of memory, and then wonder that they do not know where to lay their hand on them when wanted. The orderly and order-loving mind will not fail to employ its leisure moments in recalling and re-examining its knowledge. There is no mental process more improving and educationary in its effects. It seems clever and industrious to be perpetually loading the mind with information; but those who devote adequate time and skill to the review and re-arrangement of the items of their knowledge are most likely to be thoroughly well-informed. The good librarian spends much of his time in classifying and weeding his bookshelves. He groups the volumes so that he can find what he requires instantly, and he throws out old editions and replaces them by new. He does not expend all his energy in making further acquisitions. The wise keeper of mental records will pursue a like policy, and instead of wasting thought and time in converting his brain into a lumber-room, he will obtain such a knowledge of what he knows that he will be able to add precisely the information needed to supply its defects and give it completeness. And as a collateral reward for his pains, he will become so well acquainted with his brain-register that he can be at no loss to find any particular record which he may require.

The defect of power which renders the record-finding faculty unable to recall certain specialties of thought, as names, faces, and figures, in any individual case, may be the result of some shortcoming in the process of early mind-training. I believe this is the real cause of the peculiarity we are considering, and that to it may be traced most of the curious forms of forgetfulness which at first sight seem marvellous to the extent of being inexplicable. All that we *have* and *are*, as organisms capable of performing certain functions, is due to our inheritance *plus* the developing influence of our surroundings and the training to which we have been subjected. If a particular faculty or power has not been cultivated and developed by exercise, it will be weak and ready to break down in any emergency. Those powers or faculties which are the weakest fail the first as life advances. If disease of a paralytic character *slowly* invades the brain, there is a progressive demoralisation of the character, the least ingrained qualities being the first to disappear. What happens when a man not apparently otherwise out of health begins to forget names, faces, places, or particular figures, is a progressive reversion to his old habits. As a child, or in the educationary and developmental stage of the life of his organism—either his own life or that of one or more of his progenitors—he or they were the subjects of neglect in respect to the particular class of matters which are now forgotten. Either there was defective observation or else some insurmountable "difficulty" in the way of appropriating ideas of the sort which cannot be remembered.

It is interesting, in a scientific sense, to trace the history of persons who labour under these curious defects of memory occurring in the premonitory or early stages of disease or decay. They will almost without exception be found, on close scrutiny of their lives and experiences, to have exhibited at some previous period a want of capacity to learn, corresponding to their present lack of power to remember, and which is, in fact, the real cause of the trouble. Much harm is done and needless anxiety created by failure to recognise this fact. These strange affections of memory, like special errors of speech, are hastily set down as symptoms of the diseases with which they are often found associated. They are no more symptoms than great bodily weakness is a symptom of consumption. They occur in the course of disease, but they

may also occur in health, and it is an unscientific and mischievous fallacy to class them as indications of states they only accompany, or of which perhaps they are the incidental effects or consequences. If there is no discoverable evidence of a defect in the educational development of the mind which in mature life or advanced years exhibits a curious form of forgetfulness, the inquiry should be pushed farther back, and either in the previous or next but one preceding generation a similar case will probably be found. Generally speaking, the maternal ancestry is most important in the case of a male, and the paternal in that of a female sufferer from this defect. We have already seen how the physical, and therefore the mental, characteristics of the organism are transmitted, as the qualities of a plant are transmitted in its seed.

This is, I believe, the true explanation of those forms of partial forgetfulness which are so strange in themselves and give rise to so many anxieties. They may be significant, but their significance, so far as their *cause* is concerned, points backwards; what present or future import they have relates rather to the general state which has disclosed a pre-existing defect than to the defect itself. The way to obviate these evils is to bestow more care on mind-training, and to take care that the special incapacities entailed in a family, or exhibited by an individual, are not allowed to pass unnoticed and unremedied. Special training—that is, special exercise of the part or faculty it is desired to strengthen, or of some part or faculty other than and opposed to the one it may be wished to repress—will cure most of the faults of body and mind under which humanity labours, and special treatment on the same principle will eradicate many of the germs of constitutional defect or disease.

IN AND ABOUT WINCHESTER.

THE WEST GATE.

TO the question, "Have you seen Winchester?" the most frequent reply is, "Yes, in the train—on my way to Southampton (or to Portsmouth, &c.). I didn't notice anything about it, except of course the Cathedral."

This sort of response is always particularly exasperating to a person who *has* seen Winchester, for he will probably tell you that it is better worth visiting than any other town in the county, and that you little know what you have lost by not getting out of the train on your way to the Isle of Wight or St. Malo, as the case may be, and spending twenty-four hours in one of England's most ancient cities.

You cannot go any distance in Winchester without discovering that you are in no ordinary town or village. The antiquity of the place forces itself upon your notice, however obtuse you may be, at every turn. Entering the city at one point, we see written up in the ordinary way "North Walls," and we remark that the road-wall along which we are walking is up to a certain height built of unmistakably ancient materials, and is quite different from the brick portion above it. Here and there is a piece carved in some quaint design, while bits of broken pillars, capitals, &c., seem to tell the tale that Winchester was once surrounded by city walls, of which these fragments alone remain. And this is really the fact. At other points of the city there still stand two very ancient-looking pieces of masonry, West Gate and King's Gate, while the names of South Gate, East Gate, and North Gate Streets show that these were at some distant period the entrances and gates of the city.

In Winchester we are indeed, whether we will or no, carried back to the past, and when we learn from the Cathedral authorities that its earliest date is 180, and we find therefore that it has existed in some form or other almost as long as the Christian religion, that it is indissolubly connected with the names of Hardicanute, King Arthur, and Alfred the Great, we begin at once to feel that the town which surrounds this "hoary fane" must of necessity have its tales to tell of bygone generations.

To the Cathedral itself we might well devote the whole of this paper, but as our object is rather to speak of Winchester itself, we can only bestow upon it a few passing remarks. Even before the date already mentioned, A.D. 180, the site is said to have been occupied by a heathen temple, portions of which no doubt existed during the early years of its use as a Christian church, though the whole fabric was eventually destroyed, being rebuilt and re-consecrated in 293; converted once more into a heathen temple by Cerdic in 516, and again pulled down, rebuilt, and re-consecrated during the next century. From this date the history of the Cathedral is still a chequered one; at one time enriched and beautified, at another despoiled and defaced, according to the spirit of the age. The outside has certainly no great beauty to recommend it, and the intermingling of various styles, the result of additions and restorations at various periods, would probably rather annoy the eye