accuracy of his information surprise us at every page. It must be confessed that it required a good degree of enterprise and assurance to have secured some of his sketches. The Japanese are a most amiable and polite people; but they must have been amazed, and perhaps amused, at the persistency with which the artist went about peering behind their screens, under their mats, and into their closets. We, however, have no reason to complain; for he has seen for us far more than we could have seen for ourselves, and has brought to us such a budget of facts, and such a portfolio of illustrations, as we could not have gathered for ourselves in a lifetime.

In any country a dwelling-house is the product of complicated causes. Climate, the prevalence of destructive agencies, the character of the material available, the skill of the mechanics, the wealth of the people, the growth of artificial physical wants, the development of a taste for the beautiful and refined in life, — all these are potential causes in determining the character of the dwelling. These causes account for most of the peculiarities of the Japanese house, as compared with our own. From time immemorial, Japan has been visited by earthquakes and typhoons. These will explain why the Japanese builds his house as low as possible, and prefers wood to stone. The climate is mild, and does not demand the formidable provision against the cold with which we are familiar. This may account for the absence of chimneys and stoves. It puzzles us, however, to understand why the Japanese, who has shown such cleverness in the development of many of the arts of civilized life, has made so little progress in others. In 1542 the Portuguese landed on the southern islands of Japan, and left there, among other traces of their visit, a number of the matchlock guns which were in common use in Europe at that time. After the lapse of more than three hundred years, you can see the hunter of to-day out on the hills with a gun which is of the identical pattern which the Portuguese brought thither. The Japanese gunsmith has found out how to make the matchlock a far more ornamental weapon than it was in the hands of the Portuguese. He has decorated the stock, and inlaid the barrel with gold and silver, and provided it with exquisite fittings; but still it is the same old matchlock, without a single effective part changed or improved. Such absence of progress is surprising; but it does not surprise us half so much as their marked superiority in other and more difficult arts. In the modelling and decoration of pottery; in ornamental metal-work; in weaving and embroidery; in painting, carving, and enamelling; in the exquisite workmanship of their lacquer wares, — their achievements put them in the very first rank.

In all these departments of industry the Japanese now have an acknowledged position. It has not been so well known that in many of the humbler departments their work is scarcely less to be admired. Professor Morse has given us, in this volume, sufficient evidence of the excellence of their carpentry and joinery, of their skill in gardening, and of their cleverness in making both house and garden contribute not only to the physical comfort, but to the intellectual pleasure of the occupants. We are specially indebted to the author for exhibiting to us so clearly the internal arrangements of a Japanese dwelling-house, and the domestic routine which goes on in it, and the evidences of comfort and refinement which are everywhere seen. The beautiful products of their ornamental arts have become familiar to us, and are almost as much at home in our houses as in theirs. But the implements of common life are still strange to us; and we are thankful to Professor Morse, who, in this book, has given us so much information about them. I need only mention such illustrations as those of a carpenter's tools, of a thatched roof, of the interiors of dwelling-houses, of a kitchen range, of their bath-tubs and lavatories, of their candlesticks and lamps, of their wells and water-buckets, of their gardens and garden-lamps, to show how varied and interesting are the contents. We are sure that Professor Morse's portfolio is not yet exhausted; and it only remains for us to express the wish that in due time he may open for us another instalment of his delightful wares.

PHYSICAL EXPRESSION.

IN the term 'physical expression,' Dr. Warner includes all those changes of form and feature occurring in the body which may be interpreted as evidences of mental action. Such changes are taking place constantly, and in response to all kinds of mental impressions. The majority of them are involuntary, and, so far, trustworthy, it being the height of art to simulate a feeling successfully. At first thought, it would seem that facial expression is the most important of these outward signs of inner processes; but a little observation will convince one that the posture assumed by the body, — the poise of the head and the position of the hands, — as well as the many alternations of color and of general nutrition, are just as striking evidences of the course of thought. And such changes may be permanent as well as

Physical expression: its modes and principles. By FRANCIS WARNER, M.D. (International scientific series.) New York, *Appleton*, 1885. 12°.

temporary, thus displaying the general caste of mind as well as the transient emotion by which the individual is excited. The subject thus developed by the author becomes quite extensive, and is exceedingly interesting. By studying it in animals and infants, in whom the higher mental control which often modifies involuntary changes of expression in adults is absent, by showing its practical application in enabling one to read character, and by drawing from the realms of art as well as nature for his illustrations, Dr. Warner has succeeded in bringing together an entertaining series of facts, and deducing from them some instructive conclusions. We all believe that we can detect the real feelings of others in their faces, and that we can successfully conceal from others our own thoughts. How difficult both processes may become, and yet how fully they repay some study, the readers of this very pleasing work will learn.

In the last chapter the author describes an ingenious piece of apparatus by means of which the motions of the hand may be graphically recorded in those diseases in which irregular movements occur. He has evidently made some study of such affections, as the facts recorded in chapter vii. show. How far such a chapter may be generally appreciated in a popular work is questionable, as the terms employed would be intelligible only to physicians. But the subject would have been incomplete had the changes of expression incident to disease not been alluded to. To those who are curious to go into the subject more deeply than is possible in a popular treatise, the bibliography on pp. 344–346 will be of service. The work is fully up to the high standard maintained in this series, and is by no means the least interesting of the volumes already published. M. A. S.

REFORMS IN ENGLISH PUBLIC SCHOOLS.

THE public schools of which Mr. Cotterill writes are British, not American, and his starting-point is ahead of any thing that can be proposed as an immediate goal in other countries, — ahead, at any rate, in this, that English public schools already, as a matter of fact, are nurseries of *character* quite as much as institutions of learning. Mr. Cotterill's suggestions are mostly in the line of character. Health of character is for him the end of education. He is down on competitive examinations of a severe sort, would have a test of proficiency in bodily exercises introduced into those of the Indian civil service, believes in making out-door exercise compulsory on all boys three days in the week, each boy 'changing into his flannels' for the purpose, would restrict the 'tuck-shop' facilities the boys now have, and disbelieves in giving them too much help, whether intellectual or physical. Translations, and aid from the teacher beyond a certain point, are in his eyes equally bad; and the boys ought to prepare their own cricket-grounds, and take care of their own play, with less professional aid than they now appear to get in the larger schools. He believes in 'manual training' thoroughly, for a variety of reasons, not least among which is that it widens sympathy among classes. The book is a refreshing example of the sort of spirit the English public schools, even in their present 'unreformed' condition, engender, and increases the reader's desire to see them imitated here on a larger scale than heretofore.

Suggested reforms in public schools. By C. C. COTTERILL, M.A. Edinburgh and London, *Blackwood*, 1885. 12°.

THE government of Tasmania are, according to *Nature*, making arrangements upon a large scale for naturalizing lobsters, crabs, turbot, brill, and other European fishes in the waters of that country. The various consignments will be shipped at Plymouth, and transported through the medium of the steamship companies trading between London and Hobart. An exhaustive report has been published by the Government of Tasmania, setting forth the objects in view, and giving suggestions for carrying them into effect. The report adds, that, while the achievement of the acclimatization of European fishes would lay the foundation of new and very valuable fishing industries in Tasmania, it might also prove a highly remunerative commercial enterprise to the shipping firms under whose auspices the operations will be conducted. Applications have been made in various quarters for supplies of fish, which have been satisfactorily responded to. Special tanks are being prepared, as well as apparatus, in order to provide for the necessities of the fish *en route*, which, it is anticipated, can be transmitted with little difficulty. The success that has hitherto attended the acclimatization of certain European fishes in New Zealand has had the effect of inspiring the government of that colony with considerable enterprise in developing their fisheries. They are now about to collect the ova of Salmonidae from English waters in large numbers through the instrumentality of the National fish-culture association and other bodies, with a view to rearing the fry in New Zealand. A shipment of eggs will also shortly be sent to Australia, where great success has attended the introduction of our fishes, except in a few instances, when failure resulted more from misadventure than from the impracticability of the attempt.