Virchow points out that part of this ancient culture is probably due to Phœnician influence (*Zeitschr. für Ethnologie*, 1887, No. v.).

PREHISTORIC SKATING. — As is well known, the art of skating is a prehistoric one. In many parts of Europe bones of domesticated animals have been found which had been used as skates or as runners of small sledges. It is of considerable interest to learn that similar implements are found still in use in several parts of northern Germany. In the *Journal of the Berlin Ethnological Society*, sledges are described which consist of a board resting on the bones of a horse. But, besides this, skates are used the runners of which consist of the lower jaw of cattle, the curvature of the lower side serving admirably the object of the skate.

BOOK-REVIEWS.

The Early History of the English Woolen Industry. By W. J. ASHLEY, M.A. Baltimore, American Economic Association.

"I CANNOT but be sensible," says the author, "of the honor which the American Economic Association has done me by permitting me to join in their work." The members of the association might say in reply, that they are sensible of the honor which Mr. Ashley has done them in consenting to take part in their work. The co-operation of English and American students in economics is most encouraging; at least, we on this side of the water appreciate very highly such papers as the one which forms the subject of this notice, or as lately appeared in the *Quarterly Journal of Economics* from the pen of Professor Foxwell of Cambridge.

There are two points of interest in the preface to this monograph. In the first place, Mr. Ashley explains, very properly we think, the revival of economic studies in the United States. This country, he says, "exhibits the forces of competition and capital working on a larger scale than elsewhere, and in a freer field, uncrossed by any of the influences of decaying feudalism." England is no longer "the classic land of capitalistic production," as Karl Marx once called her: that honor now belongs to the United States. It is, then, chiefly because economic questions have lately come to be of such importance, that Americans are studying them with earnestness; and it is because the field offered for their solution is comparatively free that European peoples regard that study with peculiar interest. But, in the second place, our author cautions American students against being too greatly influenced by the teachings of German universities. "No observer of German thought," he says, "can fail to see, that, though most vigorous within its range, its range is exceedingly narrow. German writers seldom realize the atmosphere of individual initiative in which English and American thought moves." And he adds, "American teachers will be compelled, by the traditions of their country, the needs of their pupils, and the criticisms of their opponents, to give due weight to the forces of competition and to the arguments of more recent English economists." This view is certainly correct. There is a radical difference between the German and the American. Whether we consider political or industrial affairs, the closer we observe, the more strongly do differences impress themselves upon our minds. German thought does not fit American affairs. The only lesson of abiding importance brought from the universities on the continent pertains to methods of investigation.

Turning now to the monograph itself, we find it to be an eminently satisfactory sketch of the history of the English woollen industry from earliest times to the period of the great inventions. The peculiar interest in such a sketch lies in the fact that the history of the woollen industry fairly represents the development of all industries. Whether we consider the relation of artisans to early local government, or the internal organization of trades, or the social and political influence of changed methods of doing work, we find a true picture in the history of the woollen industry. The author divides his sketch into four parts. He first treats of the establishment of the guild system; second, of the education of the English workman by the importation of foreign skilled workers; third, of the rise of the merchant class; and, fourth, of the growth of the domestic system. For us in this country the part which treats of the separation of the merchant class from the main body of workers is perhaps the most instruetive. Americans pride themselves on being cosmopolitan, and it is true that their love of travel makes them familiar with the existing habits and customs of many peoples; but when it comes to history, their minds are essentially provincial. They are prone to regard the nineteenth century, out of which their minds have never travelled, as the natural and therefore the permanent order of society. Their conservatism is, on this account, unreasonably strong. It would be a good thing if every business-man could be brought to see that there once existed a successful industrial society, in which a separate class of traders was not known. They then might regard with less suspicion certain tendencies in modern times looking towards further industrial changes.

But professed students of history, as well as business-men, will find in this monograph much instruction. It is a common error to say that machinery and steam-power are responsible for the creation of a clearly defined laboring-class. Mr. Ashley shows that such an assumption is not correct. His sketch closes with the establishment of the 'domestic system' of industry, but the liberties and rights then exercised were very nearly the same as those which laborers now enjoy. It needed only the great inventions to fully establish the 'factory system' as we now know it, and to bring about the era of great industries. Failure to recognize that the social position of the workman was quite the same before and after 1760 is responsible for many misinterpretations of industrial history.

In closing we can only say that American students are always grateful for reliable information on English industrial history. They feel that the society with which they deal is as much the result of English life during the middle ages as is English society itself. But this they cannot study at first-hand, because of paucity of material, and on that account they read with eagerness all that English scholars may write upon the subject. Mr. Ashley, then, has the thanks of American students for his excellent monograph on the English woollen industry. H. C. ADAMS.

A Plea for the Training of the Hand. By D. C. GILMAN, LL.D.

Manual Training and the Public School. By H. H. BELFIELD, Ph.D. New York, Industrial Education Association. 8°.

Primary Methods. By W. N. HAILMANN, A.M. New York, Barnes. 12°.

Industrial Instruction. By ROBERT SEIDEL. Tr. by Margaret K. Smith. Boston, Heath. 12°.

The Manual-Training School. By C. M. WOODWARD, Ph.D. Boston, Heath. 8°.

EACH one of these books bears evidence in its own way to the educational *Zeitgeist*. Each one, had it appeared ten years ago, would have appealed to perhaps a few score readers: it is safe to say that at this time they will be read by thousands. Educational thought and educational practice are in motion. In all parts of the country and in all grades of schools the signs of progress are seen and its effects are felt. The dominant trait of this progress is a demand for reality in education, for practicality in the widest and best sense of the word. Teach the child to know not merely words, but things, objects; teach him not merely to know, but to use and apply what he knows. Teach him literature, teach him arithmetic, teach him geography, and so on, but also teach him something about the busy, active life of which he is so soon to form a part. Teach him not only to perceive and to remember, but to compare, to judge, to execute, to manage. This, if its opponents did but know it, is the philosophy of manual training; and because this philosophy is so certain and so sound, the manual-training movement is carrying every thing before it. The best educational thought of the country is enlisted in its service; and its advocates are making rapid and successful progress, while its handful of vociferous opponents are asserting that it is useless, crude, and destructive of the school. The success of manual training, and the thought and inquiry it has aroused, call for a literature. All of the books whose titles are given above are in answer to this call.

The first is a handsomely printed pamphlet, the first of a permanent series of educational monographs to be issued under the editorship of the president of the Industrial Education Association of

New York. That association is the recognized centre of the manual-training movement, and in these monographs we may expect to find some able expositions not only of manual training, but of other educational subjects. We notice that Sir Philip Magnus of London, Professor Paulsen of Berlin, Professor Sluys of Brussels, Dr. Hannsk of Vienna, Professor Salicis of Paris, Oscar Browning of Cambridge, Colonel Parker of Chicago, Dr. Channing of Harvard, Superintendent Mac Alister of Philadelphia, Dr. A. G. Haygood of Georgia, and Dr. Wey of Elmira, are on the announced list of contributors; and we await from their pens some of the best educational writing, in a convenient and inexpensive form, that has ever been printed in this country.

The present issue is a double number, and the two papers complement each other. President Gilman writes in an easy, graceful way of the training of the hand, and puts his argument so simply that the veriest novice in educational matters should be able to understand it. His summary of the principles of manual training (pp. 11–13) is very comprehensive, as is the following concise summary of the whole question: "Manual training is an essential part of a good education, whether that education be restricted to the common school or carried on to the highest discipline of technical schools and universities" (p. 13).

Dr. Belfield of Chicago, whose paper forms the second part of the number, makes a powerful argument on the practical side, for the introduction of manual training into the common school. He is able to show from his own experience that better progress is made in other studies with manual training than without it. This is the natural result of the intellectual tonic administered by manual training, as well as of its harmonious development of all the faculties. For the student or teacher who is making a study of manual training, this first number of the Educational Monograph Series is the best possible introduction to the subject.

Dr. Hailmann is a gentleman who has written much, and on the whole well, on education. He is a student and translator of Froebel, and a firm believer in kindergarten methods. In his preface he expressly states that the present work is issued in response to the growing demand among primary teachers for 'busy work' and 'kindergarten methods.' The book is eminently practical, and, so far as it goes, gives an excellent manual-training course for the primary school. We will only say that clay can be used more than the author provides for, and that drawing is the very foundation of manual training. The latter fact seems to have escaped Mr. Hailmann's attention while he was engaged on this book.

'Industrial Instruction' is a translation from the German of Robert Seidel, by Miss Smith of Oswego Normal School. It is a philosophical treatise on manual training, and yet it is sufficiently easy of comprehension to be of assistance to all teachers. An unfortunate disjointedness of style, the usual attribute of German writing, mars the book, but the translator seems to have worked hard to counteract the effect of this. The second chapter, which is entitled 'Errors, Contradictions, and Inconsistencies of the Opponents of Industrial Instruction,' is respectfully commended to the attention of the secretary of the Massachusetts Board of Education and the superintendent of schools at Worcester, Mass.; for both of these gentlemen are not only utterly in the dark about manual training, but they are using their influence on the platform and in educational journals to keep others in the same condition. Seidel shows that the sort of industrial instruction which such persons declaim against has for its aim "principally the development of certain kinds of manual skill, partly by this means to promote domestic industry, partly to prepare for a later profession, to supply trained strength to hand-labor, and thus to elevate it." All sane men who know any thing of public schools unite in insisting that instruction of this sort must not be permitted to find a place. But this instruction is diametrically opposed to that which the advocates and expounders of manual training are upholding. Their manual training is educational, not technical: it develops the judgment and reason, not the power of imitation. Inasmuch as the opponents of manual training in this country seem to be unable to distinguish it from technical instruction, we hope that they will read Seidel's book. Every possible confusion that they can fall into is there explained, and every possible objection that they can raise is there answered.

Dr. Woodward's book is not so satisfactory, but it has a value of its own. It deals with the manual-training school only, considered as a separate institution. This it discusses in full detail, and the theory and practice of the work done at St. Louis are clearly presented. Much of the information as to cost and character of equipment is that which is frequently called for at this time by the school authorities of cities where manual training is being introduced. Almost half the book, however, is given up to Dr. Woodward's various addresses, some of them delivered fifteen years ago. No attempt seems to have been made at editing them, or striking out redundancies and inconsistencies. However forcible they may have been when delivered, they lose much in the present arrangement.

We would close as we began. All of these books are valuable and suggestive. All of them should be widely read, especially by teachers and by parents who have children to educate. All of them approach manual training in the right spirit and with intelligence. The insight of the authors is sufficient to guard against any such ludicrous presentation as that given by Mr. Love in his 'Industrial Education,' a book which we had occasion to notice a few months ago (*Science*, x. No. 247). Taken together, they would form an excellent beginning for a library on manual training.

La Psychologie Physiologique. Par G. SERGI. From the Italian by M. MOUTON. Paris, Felix Alcan, 1888. 8°.

THE flourishing condition of science in Italy has of late been the subject of frequent remark. The universities have filled their chairs with a new generation of men, well schooled in the best methods that the continent can offer, full of enthusiasm for their special pursuit, and gifted with a taste for original research as well as with a comprehensive appreciativeness for the work of others. As the result, there have been appearing from the press of Italy many very valuable contributions to all departments of science, and, what is especially noteworthy, publications tracing distinct novel lines of thought. This has made all scientists look more carefully into the Italian periodicals; has set Frenchmen, Germans, and Englishmen to translating their books; and promises to make a knowledge of Italian quite as requisite a possession for the scientist as a knowledge of French and German.

In the scientific study of mental phenomena the Italians stand in the foremost ranks. They have developed a school of criminal anthropology, setting forth the true nature of the criminal as an aberrant form of humanity, that has gained a world-wide recognition. Their studies of the insane are full of ingenious methods and suggestive results. Some of the best work on the localization of function in the brain has been done in Italy. It is, then, not surprising that they see in experimental psychology the completion of the circle of the sciences, and do all in their power to develop and spread its teachings. Nothing could better illustrate the truly admirable character of their work than this manual of psychology. The author is professor of anthropology in the University of Rome, but his conception of anthropology is broad enough to include an intense interest in all that pertains to the human mind. The volume is written in an entirely modern spirit, and is quite different from the type of text-book that prevails in our colleges.

Perhaps no easier method of indicating the character of its contents could be pursued than that of *résuméing* the table of contents. It begins with a terse description of the physiological elements of which the body is composed, with a special description of nerve cells and fibres. Then follows a chapter on the objects of psychology, showing its very intimate connection with physiology and the insensitiveness with which the unconscious shades into consciousness. There is no attempt at abstract, pure distinctions, but a straightforward account is given of what it is that a student of psychology must know and be interested in. Then sensation is treated, and covers nearly a hundred pages. After a general consideration of what sensibility implies, follows a more than usually good and full account of the facts summed up by the psychophysic law. Then the special senses are treated, though not at as great a length as might be desired; a surprisingly large amount of information, however, is expressed in a very few pages. This section is concluded by an interesting chapter on the interpretation of sensations. The next part of the book deals with the intellect, and be-