

SCHOOL OF PRACTICAL INDUSTRY WANTED.

SINCE the Paris Exposition of last year, which afforded the nations of the world such excellent opportunities of comparing progress in the industrial arts and sciences, the advantages of a system of public education that shall include instruction in those practical industries on which a country depends for the development of its material resources and the excellence of its manufactures, has been felt throughout Europe. In England, much interest is manifested in establishment of schools, where young men can receive instruction in the theory and practice of some industrial art or science. The greater excellence of continental manufactures, and the superior skill of European artisans in all the mechanical branches, over those of Great Britain or America, must be acknowledged; and this fact, so galling to national pride, awakened an interest in England in the establishment of public schools, where young men can be fitted for some industrial pursuit. Mr. Whitworth's liberal donation of £100,000 for the founding of such an institution, and the popular appreciation of both the giver and the gift, show the importance which the English people attach to practical education in mechanical arts.

In this country the necessity for such schools is even greater than in England. We have comparatively few native American mechanics and, as a class, they are inferior workmen to those of Great Britain. An acuteness of perception and a natural inventive talent have, in many cases, compensated for the lack of practical skill in the details of a trade; but in almost every instance American inventors have to depend on the skilled labor of foreign immigrants for the manufacture of their inventions and the application of their improvements. In our large sewing machine, piano, organ and watch manufactories, our machine shops and foundries, our mines and collieries, our cotton and woolen mills and shi-yards, the best average workmen are foreigners. In the higher branches of manufacture requiring a theoretical as well as a practical knowledge, few Americans are proficient. Where a knowledge of drawing and designing are required, we are still further behind. For bronzes, china ware and ornamental work of all kinds, patterns for wall paper, carpets and printed fabrics, church painting and interior decorations, we are dependent on foreign workshops or foreign mechanics. In short, there is no branch of manufacture not distinctively American, in which, without the assistance of foreign workmen, we could compete successfully with other countries.

The reasons for this are apparent. In France the liberal encouragement offered to the mechanic arts, under the first Napoleon and his successors, has developed the resources of the country, while the honors with which success in any branch of manufacture is rewarded have ennobled labor and attracted to the trades a higher order of talent. In Great Britain a more thorough system of apprenticeship than would be found practicable in this country, accounts for the superior skill of the average British mechanic. In Austria, Prussia, and the manufacturing cities of Germany, the higher average of intelligence and education, and the facilities offered in schools for the study of the practical arts and sciences, accounts for the superiority of the better class of artisans over those of any other countries of Europe. It is on this last-named means that we must rely for the education of our young men in the mechanical trades. A knowledge of principles that could only be learned by years of actual labor in a workshop, might be imparted in a few weeks or months by competent instructors; and besides enabling our young men to fill higher and more lucrative positions, would give them larger and more comprehensive ideas, a more thorough understanding of their business, and an ambition to improve, by study and application, that would develop their highest faculties.

The work in this direction has so far been imperfect and incomplete. In the case of the Children's Aid Society, much good has been accomplished by the apprenticing of a large number of vagrant boys to useful trades, which they learn by actual practice—as they would acquire a language without a knowledge of its grammar; but this amounts to nothing more than a practical charity. The Cooper Union has also done something in the right direction, by opening free classes in which elementary science and art are taught. The female Academy of Design, which has been mostly attended by young women who studied art as a means to an honorable and independent living, instead of giving practical instruction in such useful and profitable branches as lithographic drawing, ornamental designing, and painting and photograph coloring, has been under control of Prof. Rimmer, an enthusiast of the Ruskin school, who undertook to instruct his pupils during the eight months terms, by delivering incomprehensible lectures on human and vegetable anatomy and the abstruse principles of high art. All this is so much waste labor, as far as its practical benefits are concerned; and although to some extent useful, the Cooper Union classes have accomplished few of the results intended. As far as we know, the School of Mining at Columbia College, and the two or more Agricultural Colleges in different parts of the country, are the only schools or departments giving the kind of instruction so much needed by our young men.

Few cities offer better facilities than New York for the establishment of such a school as we have suggested, and no corporation could undertake the work as readily as our Board of Education. An experiment might be made in the College of New York, and thoroughly tested in some one branch of industrial instruction. As an institution of classical learning, it never has and never will be of any importance; and if, instead of cherishing the delusion that, by changing its name it became anything more than a very ordinary academy, the board would allow something of practical importance to be taught it would be far better in all respects. Suppose, for instance, a class for the study of architecture and building were added as

an experiment. Competent instructors could readily be obtained, and, in addition to thorough theoretical instruction, the new school houses being built by the board, and the hundreds of structures of all kinds going up in various parts of the city, would afford ample opportunities for practical study. Advanced pupils might be set to work on the new school houses, or allowed to design ornaments and plan needed alterations and improvements in the old buildings now occupied as schools in some of the lower wards. A few months of such study after acquiring a knowledge of first principles would teach a young man more than he could learn in as many years as an apprentice, and enable him to enter the business with a thorough understanding of what he was to do and how to do it. If this class prove a success, one might be established in mechanical engineering, and practical instruction in the principles of machinery given at comparatively small cost. Experiments might also be made in the various industrial branches of art, for which manufacturers now send agents abroad to employ German and French workmen on the most liberal terms. If something of this kind was undertaken, we should see one or more classes of intelligent and educated mechanics graduated each year; and our college, which now claims to be neither the one thing nor the other, would be of some practical benefit to the public by which it is supported.—*N. Y. Bulletin.*

THE UNPOPULARITY OF PRODUCTION.

MR. WELLS, the Revenue Commissioner, has, we believe, been more struck in the course of his investigations into the condition of American industry by the rapid decline in the quality of the skilled labor of the United States, than by almost any other fact; the cause being partly the eagerness of the better sort of young men to get into commerce, or some kind of employment in which the labor is clerical, or at all events is not in the strict sense of the term productive; and possibly to the growing disinclination of young men to submit to any course of training. An apprentice who has served out his full time in any handicraft and has learned it thoroughly, is getting to be a rare bird. In some trades, ship-building for one, printing for another, he is almost unknown. Plenty of boys are apprentices in all trades, but hardly any remain apprenticed long enough to learn their business. Either they tire of the restraint and drudgery which meet the novice at the entrance to every calling, and go a-roving, the authority of the parents being now too weak to prevent them, or they find that they can readily get employment as journeymen long before they have attained real proficiency. The result is that the workshops swarm with inefficient workmen, who only half know their business, and only one-third do it, to the great detriment of their own character, the great diminution of the national production, and to the despair of employers. The ship-builders ascribe a large proportion of the present depression in their business to the scarcity of good workmen, and they do not look very hopefully into the future, owing to the increasing scarcity of apprentices who show either the desire or intention to learn the trade thoroughly.

The eagerness of young men to escape from the workshops and farms and become clerks and speculators in the great towns—in other words, to become distributors rather than producers—does not, perhaps, do so much damage to industry as the want of thoroughness on the part of those engaged in it; but it does a good deal, and every year more. It is the fashion just now with some observers to ascribe the rush into the cities to the paper currency, and the prevalent spirit of speculation begot by it; but more of the responsibility is thrown on this cause than it will fairly bear. The spirit of speculation is no new thing. The fluctuations in the value of the currency have no doubt done something to stimulate it, but comparatively very little. In a new country with vast resources, with a thousand new schemes for their development; every day starting new railroads, new mines, new steamboats; with population doubling every twenty-five years, values must rise at an enormous and unprecedented rate, no matter how good or steady the standard may be; and when values are constantly rising, and the volume of shares offered on the stock exchange constantly increasing, it is useless to expect that there will not be constant and fierce speculation, and that the army of speculators will not continually grow in numbers and audacity. There are other agencies at work which have more to do with the drifting of the young men into the towns than speculations. One is the degrading influence, from a social point of view, which foreign immigration has exerted, and is now exerting, in all kinds of manual employment. Bacon has a striking suggestion regarding the frequency with which certain axioms are found to be common to several of the sciences, moral as well as physical—those of mechanics and mathematics, for instance, to ethics and politics; and a curious illustration of its truthfulness is to be found in the fact that just as you cannot keep two kinds of currency in circulation, one of higher value than the other, so also you cannot keep two kinds of laborers, one possessing higher social culture than the other, at work in the same fields and workshops. As the cheaper currency drives the dearer out of circulation, the more ignorant and less exacting laborer drives the better educated and more fastidious out of the market. The popular theory that the better educated and more decent workman is, the more wages he gets, and the more advantages he enjoys, is not true of workmen *en masse*. What actually happens when a degraded class of laborers come into competition with a better one is that, unless the difference between their work is enormous, the former underbids the latter, or makes the workshop and its associations so repulsive that the latter quit the field if they can find any place else to go to; and this is exactly what is happening in the United States. The flood of unpleasant foreign emigrants who are filling the factories and mines, with their low standard of living, their personal habits, their lower

type of religious and moral feeling, have made most of the "haunts of industry" so disagreeable that the American mechanic, as he used to be known forty years ago, and as essayists and "magazinites" still write about him, is gradually disappearing, at least in the East. He has gone in battalions from New England, and is getting to be rarer and rarer everywhere, except in the character of a "boss." In spite of all he hears about the equality of men, the dignity of labor, he feels that he loses caste by working side by side with the common run of Irish and Germans, hearing them swear, seeing their "mills" and their sprees, and sharing their seclusion from the moral and intellectual life of the community in which he has been born and bred. So he is seeking new seats in the small rising towns of the far West, where he can preserve his individuality and his self-respect and his social position, and bring his children up away from the immoral influence of the great workshops.

Much the same causes are producing the same effects on farm labor. Into this field of industry, Europe has poured an immense host of its poorer classes, and the native American is consequently eager, and every year more eager, to escape from it, and the readiest way of escape is by taking some kind of trade or clerk work. Moreover, the city population has become of late years such a very prominent element in American society, and has departed so far from the country standard of living; so many adventures revisit every year "the old homestead," transformed in habit in appearance and in power of enjoyment, in a way unknown to the last generation, that the country imagination is naturally dazzled to an insupportable degree. It is not in human nature for a farm boy to be contentedly, and be satisfied with the dignity of husbandry, when he knows a lad who left the next farm a few short years before is living on the fat of the land in Fifth Avenue, or that another whom he remembers as a pedlar in a small way has become a first-class speculator, and is filling the newspapers with the glory of his "operations."

Horace Greeley is incessantly advising farm boys who are on the farm to stay there, and those who have come to the city to go back; but there is little use in his preaching as long as he spreads abroad the story of his own life, and the press keeps continually slugging the praises of "self-made men." Every farm boy thinks he can "make himself," and flatters himself that he is a possible Horace Greeley. He knows that the prizes of city life are numerous, and this being the case, the fact that the failures are a hundred times more numerous does not deter him from trying his luck. If it did, it would show that one of the greatest springs of human activity had been broken. It is true the life of a young clerk in New York is dismal and comfortless, but every young man takes the possibilities of every position along with his actualities. Three in a bed is supportable enough to a man who hopes ten years later to sell five hundred thousand dollars' worth of dry goods in a year or make "a corner" in Erie.

Education, too, has got somewhat ahead of the material civilization of the country. This is particularly true as regards the girls. The common schools now supply a degree of culture and a kind of taste to the minds of the youth of both sexes, for the gratification of which neither the steam engine, nor the telegraph, nor the lightning press, has yet made adequate provision. Girls are now taught in a way even in the common schools, which would go far to fit them for "receiving" wits and beauties in New York or Boston, but which does a good deal to disqualify them for the only position which in the present state of our civilization they are likely to hold, those of farmers' or mechanics' wives; hence the bad bread, the poor health, the small families, and the tremendous consumption of popular magazines and thrilling serial tales, and cheap pianos, and the enormous competition amongst female teachers. The young men are in a somewhat similar position, but, having more physical vigor, resist better. They do not become invalids, but they go clerking, trading, brokering, preaching, practising law, or doctoring, anything, in short, but producing by labor of the hands. There are probably few kinds of labor on which the spread of education has told more unfavorably, strange to say, than farm labor. The life of the farmer is solitary in the extreme, and the spread of books and periodicals, instead of reconciling him to the solitude, is making it intolerable to him. The growth of intellectual tastes and interests, and the knowledge of the outside world and its ways, which come with reading, and with the facility of locomotion, develop the social instinct, and with it a love of change and of movement, which makes the "home-ly toil and destiny obscure" of the tiller of the soil more and more repulsive, and suggests the question whether the work of farming will ever be carried on by any class much above the European peasant in habits and aspirations.—*New York Nation.*

THE RAMIE PLANT.—The Liverpool correspondent of the *New York Shipping and Commercial List*, directs attention to the quantities and value of the new vegetable product called Ramie, which is attracting considerable attention in the Southwest. He sends samples of the fibre, and also of the cloth made from it. The fibre is much finer and stronger than the best flax, and, after the cleansing process, is said to become very soft and white, taking colors as readily as the finest wool or silk. The samples of cloth, made entirely from the Ramie, resemble the best grades of poplin or silk, in their strength, texture and brilliancy. We know too little as yet of the Ramie plant in this country, however, to estimate the effect of its introduction as a branch of agricultural industry. It is claimed that it is well adapted to withstand the Southern climate and other influences which have so important an effect on the production of cotton. Should results justify the expectations, this new product may take the place of cotton, in some sections, and thus supply the deficiency in the great staple of the South.