

chanics' Institutes and Atheneums, all providing the information and appliances that self education requires. Here, as in London, workers study the philosophy of their respective employments in the colleges and institutes; and in the various workshops on the Thames and the Clyde, learn to apply that philosophy and acquire under men of the very highest standing the various employments,—some of them of European reputation, those arts in which they in their turn are preparing to excel. In this as in other matters, the presence of a great commander, the prestige of a famous name, gives a spirit and energy and an impetus to persevering exertion and noble aims, such as no perfunctory superintendent of a government school can ever inspire.

It is thus Britain supplies better industrial training for her people, than any government provision secure. All over Scotland and England, the youth who would be a successful farmer, having studied chemistry, and one or more other subjects at the university, or while pursuing such studies by attending lectures elsewhere, and private reading, boards with one of the best practical farmers, and takes his share of the farm work for two or three years, and at the end of that time knows the theory and practice of *successful* farming, and is prepared to carry it out on his own account, or as an agent for others. In the Irish model schools, which are exactly the kind of things sighed for by the lauders of continental modes, men with the same object in view attend two or three years in these Institutes, learning both theory and practice, and at the end of that time are prepared to carry on, *not successful* farming but such farming as is practised at these establishments where the proceeds of the year never covers the labour expenses, giving the land rent free and the supervision for nothing! Those two results aptly illustrate the effectiveness of the British provision for industrial education, over any and every plan of government schools for practical training. Now the provision for this industrial education in London and Glasgow, may not unfairly be taken to represent the provision in the whole of Britain, and from theory and personal knowledge, I can safely affirm that, the workers in and around both, are literally without excuse for ignorance or the want of that culture which develops ability, and I shall wait with some curiosity to see how the asserter of continental superiority, will make out either in France or Germany, a provision so effective in stimulating to exertion, and in bringing the means of the highest culture within reach of the whole people. If any one of them can even show that the people generally in any continental state have equal facilities with the people

of Britain, so far as that less effective education which Institutes supply is concerned, I will be not a little surprised; as I do not believe that the institutions of which we hear so much in their general influence in the elevation of the people have any existence, save in three or four cities, and even there their fees if nothing else, must shut their doors against 99 out of every 100 workers, whereas in Britain the fees are generally so low, as to be within the reach of the most limited means.

While the bursaries, scholarships, and exhibitions are so numerous, that most of those without means, but gifted with more than an ordinary amount of brains, find little difficulty in attaining the highest culture, and pushing their way to the highest position for which their abilities may specially fit them in the workshop, the pulpit, at the bar, or in the senate; and the men who will not be thus enticed and tempted to self culture, can not be expected to sacrifice the time and money continental methods require to attain it. It is an old story, that "when a town is in danger there is nothing like leather," but it is necessary in establishing the existence of the lauded provision for industrial education on the continent, and its capacity for reaching to and elevating the people generally, that we should have something more reliant than a drawing masters estimate of the drawing schools in Wertemburg, or Paris, or the predictions and testimonies of Kensingtonians as to the superlative merits, virtues, and advantages of the leather of the science and art department, and something less chamaleonic than Mundella's workers, whom he represented before the government commission, as in a condition of "fearful ignorance, most humiliating, disheartening, and appalling" while in his recent lecture at Sheffield, he maintained that these self workers, exhibited such intelligence and good sense, as to secure the perfect confidence of the manufacturers; and on several critical occasions when large information and correct reasoning were specially required, Mr. Mundella found in these men of appalling ignorance, "as much wisdom tact and self denial as the best among the manufacturers themselves were able to show." What is the continental provision for industrial education, and what the facilities and inducements held out to the people generally to accept and embrace it?

S. R.

THE American dollar weighs 412½ grains; of these 41½ grains are copper. The copper is one ninth of the silver.

ADDING to the width of a belt and of the faces of the pulleys, increases immensely its power of conveying force. A wide belt is always better than a narrow one strained to its utmost capacity.