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BEFORE AND AFTER.

Methought I stood midway on Life's strange sea
And looked back: a dark and sin-stained track
Proclaimed my early years; above, the rack
And storm of Heaven raged unceasingly;
Sad straggle here and there recall'd to me
Long shipwreck'd hopes and prayers that God rent back.
My heart was troubled and my soul was black;
I loathed the past, from which I could not flee;
When, lo! a spirit touched me, and I turn'd
And look'd beyond—the sea was silver-bright;
The heavenly blue was glad with golden light;
A rainbow promised all for which I yearned.
Then, never looking back, the future path I trod
That led me unto thee, and through thee, unto God.

Scepter, in Week.

ENGINEERS—ANCIENT AND MODERN.

The bumpiousness of modern engineers gives little offence because it is honest and guileless. Perhaps the order of mind which devotes itself to that pursuit is commonly averse to historic reading, and in any case the hard mechanic training necessary for an engineer of the present day disinclines him to spend his scanty leisure in studies which cannot be turned to account. The result is that he conceitously believes his art to be the special flower and glory of the age—in which he is not altogether wrong; but beyond that he regards all earlier feats of engineering as unworthy of serious discussion. And the public, as ignorant with less excuse, encourage this view. It is a waste of time to ask him how the boulders of Stonehenge were conveyed to their resting-place, how the walls of Fiesole or Mycenae were built; these marvels represent the power which lies in the brute force of multitudes, and there's an end of the question. Engineering now is an art and a science, with which the rude work of savages has no connection. One must not inquire why he takes it for granted that Stonehenge, for example, was built by savages, where the brute multitude came from, how they subsisted on Salisbury Plain, or why it is necessary to assume that they were unacquainted with mechanics. All that is *chose juges*—beyond dispute. If you cite records of antiquity which tell of works he cannot rival, the fact alone is proof that the record is a lie; for how can it possibly be that mere Granks and Romans should have been able to do what the builder of the Eiffel Tower and the Forth Bridge cannot accomplish? We had an amusing instance of this feeling lately. The ingenious M. Eiffel and the artistic M. Bartholdi have been gravely pondering the Colossus of Rhodes—measuring it and weighing it as per description, and they conclude that the thing was simply impossible. It could not have been set up, to begin with, and when set up it could not have stood the pressure of the wind. This is demonstrated by all the rules of modern science, and he who does not admit the demonstration must be prepared to show that two and two do not make four. Those antique personages who professed to have seen the Colossus were victims of an ocular delusion or flat story-tellers, and that greater number who mention it incidentally, as we might mention the ruins of the Colosseum, were credulous gossips. The fact is that Messrs. Eiffel and Bartholdi argue in the fashion usual with engineer. Not all of them would pretend that they know any law of nature which applies in such a case. But very few would listen patiently if it were urged that the ancients knew some laws with which they are unacquainted.

So it appears, however, to the disinterested student; and we can bring forward evidence enough. If it be true that the Colossus of Rhodes is really proved "impossible," according to the best modern authorities, this is a good illustration to begin with; for its existence is as well authenticated as the Temple of Delphi and the statue of Olympian Zeus—or the Tower of London, for that matter, to one who has never seen it. By some means it was set up, and by adaption of some natural laws it was made to stand until an earthquake overthrew it. One is embarrassed by the number and variety of illustrations to the same effect which crowd upon the mind. Since the Colosseum has been mentioned, we may choose examples of that class. Is M. Eiffel prepared to put an awning over Trafalgar Square when the sun shines, and remove it promptly, without the aid of a central support, of steam-engines, or even chains? The area of the Colosseum is certainly not less. This may seem a trifling matter to the thoughtless, because they have never considered it. Roman engineers covered in that vast expanse with some woollen material, and they worked the ponderous sheet so easily and smoothly that it was drawn and withdrawn as the sky changed. The bulk of it must have weighed hundreds of tons, all depending by ropes from the circumference. But the ancients thought so little of this feat that they have left us only one trivial detail of the method. So Julius Cæsar stretched an awning above the Forum Romanum and great part of the Via Sacra in the space of a single night. Have any of our modern engineers pondered the contemporary descriptions of Alexander's durbar tent before Babylon? That, again, appears to have had no central support. It was upheld, says Phylarchus, by eight pillars of solid gold. Of the glorious plenishing within we have not to speak, since our theme is mechanics. Around the throne and the great courtiers stood 500 Macedonian guards; in a circle beyond them 500 Persian guards; beyond these again 1,000 archers. To fix a tent which held 2,000 soldiers on duty with arms and accoutrements, surrounding, in successive circles, the most gorgeous Oriental Court that ever was, with hundreds of satraps, councillors, generals, eunuchs and slaves, would perplex a mechanic of the nineteenth century. He will reply that the story is false—must be, because he could not match it. Happily, the awning of the Colosseum stands beyond dispute, and Alexander's tent is a small matter compared with that.

But we undertook to deal with the engineering of the ancients in connection with the theatre, having chanced on that class of illustration. Pliny tells how Metellus Scæurus, Ædile, built a wondrous edifice, which stirred his rival, C. Curio, to frantic jealousy. It may be worth while, in