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OUR NEW DRESS.

With the commencement of the new volume on the 1st of January next, we shall present the SCIENTIFIC AMERICAN, which has now attained its eighteenth year, in a new and handsome dress—one, we trust, that will become its age and character. Though we are growing old and somewhat gray in the service, we have still vigor and determination enough left to make us desire that our next volume should be by far the best yet issued. We shall continue to trim the midnight lamp, if necessary, in order that we may keep the standard of the SCIENTIFIC AMERICAN up to any former period in its history. We believe that no other journal ever published has had truer or better friends than ours; and we again appeal to them to aid us in promoting its more widespread circulation. We do not depend upon agents; we prefer to rely upon the good words and deeds of our friends, and upon the well-established character of our journal, to increase its circulation. Friends! lend us a little of your valuable time in increasing our subscription list, and we will endeavor to more than repay you by making it still more worthy of your confidence and support.

ON THE VALUE OF SMALL PATENTS.

There are a great many persons brought more or less in contact with the novelties and inventions of the day, who have heard the remark, "What a simple thing; anybody could have invented that!" Exactly; a truer criticism was never passed. It was not so much the nature of the invention, perhaps, as the shrewdness of the individual who introduced it and foresaw the advantages likely to accrue to him in a pecuniary point of view. If any one had told the inventor of the metallic-tipped shoe for children that his simple idea was worth hundreds of thousands of dollars, he would himself have thought the prophet a little too sanguine. Or to take a higher class of invention, no one could possibly foresee the tremendous trade which has sprung into existence from the sewing-machine; what an almost endless category of small articles or appliances, such as hemmers, fellers, quilters, button-hole machines, loop-checks, needles, shuttles, &c., have been, and are daily invented and brought out as indispensable additions to the greatest of all modern inventions! It is a mystery to us what becomes of all the sewing-machines; one firm, we are told, turns out 600 per week, and besides this company there are half a dozen others of nearly equal capacity urging their shops to the utmost.

The office or object of the inventor is of course to make money, but if he achieve the double task of lightening labor and amassing wealth, his calling is so much the more to be honored. There is no question but that those who improve the character of the simple articles in use in every household, or substitute newer and more ingenious appliances for doing hard work anywhere, have a sure prospect ahead of a most alluring nature. No investment is equal to a good invention of a popular kind, and none so quickly returns the discoverer an hundredfold for his

outlay of time and study. Look about you, young men, and though you may not discover "sermons in stones," or "books in the running brooks," you will find "good in everything," and chances for wealth you little dreamed of. Of the inventions relating to kerosene lamps, it is calculated that upwards of 400 patents have been issued, and the number increases; this proves that there is or has been an immense field in that direction; which many parties, to our knowledge have worked successfully and reaped fortunes thereby. What is true of this line of invention is equally so with reference to others; let those who wish to obtain a fair remuneration for their time and services turn their attention to the daily avocations of life, and improve the tools, instruments, utensils, and what not, employed in them, and they will have no reason to regret it; unless, indeed, after having once devoted time and attention to a good idea, they lay it on one side till a more convenient season, supposing that the world is going to wait their convenience for the improvement. Such a course is a mistaken one. Repeatedly we have heard parties say, "What! is that patented? I have just such a model at home now;" and then when it is too late of course they go to work with intense zeal to bring out their invention. "Delays are dangerous;" it is an old proverb, but a true one.

Reader, if you have an idea respecting an invention, do not hesitate, but bring it before the public at once. An idea in the shape of a useful patented article is thousands of dollars locked up in idleness which might be turned to good account. See to it, that in your case, at least, no halting, indecisive, half-way policy prevents you from obtaining a reward for your outlay of time and money.

THE MACHINIST'S STRIKE.

Up to this time the disagreement in regard to prices between the machinists and their employers prevails in full force. No men are at work in the large shops, such as the Allaire, Novelty, Morgan, Murphy, Delamater, Neptune, Etna, and Secor Iron Works. These are the principal firms, employing upon an average about 300 machinists each. The attitude of the employers upon the question is unchanged; they declare that the wages of the men have already been raised 48 per cent (not cents) since the increased rate of living prevailed, and that it is utterly impossible for them to advance the mass to any greater amount. They also say that their contracts do not admit of a further increase, and that it would be more politic for them to close their works than to accede to the demands of their operatives. Upon the other hand the workmen aver that they find it impossible to live with their present remuneration, and that while the wages have been increased in a great many cases, to the sums stated, the mass of them receive but little more than before the war; and at the best not so much as boiler-makers and members of other branches or trades employed in common with them upon steam engine work, and not considered so high in standing (as mechanics) as machinists are.

The men assert their unwillingness to go to work at the old prices, and declare that they will carry their labor to other markets before they will submit. We have no comments to make upon this condition of affairs. To us it is most melancholy. It was stated to us in two of the principal shops that the pay roll had fallen off about \$1200 per week since the strike; if this be taken as the average throughout the principal establishments in the city, for the three weeks now ended in which the strike has been maintained, the workmen are some \$300,000 out of pocket. The winter approaches, and soon the cold weather will be felt in all its severity; with coal at \$11 per ton, it seems well to take counsel for the future and look forward to the probable results ensuing from idleness. Not only this, but our machinists, than whom there is no class more loyal or patriotic, must see that the interests of the country suffer greatly by their action; and they will, we hope, reconsider the matter and see if some understanding cannot be arrived at whereby all parties will be suited.

FRENCH architects are making a great fuss over an iron building recently erected in Rue St. Honoré, Paris; it is a nine-days' wonder to them.

THE FOREIGN IRON-CLADS.

Let those restless individuals, over whom the terrors of foreign intervention still hang threateningly, possess their souls in peace; the best possible proof of pacific intention is the absence of any power to harm. The lumbering old iron-clads of England, and the unwieldy carcasses, denominated frigates, of France, are good examples of old-fogyism as applied in the construction of national defenses. If we are to wait until these monstrous inventions arrive upon our coast, we may put off the evil day of foreign war for a very long time.

Paragraphs shadowing forth the progress or rather degree of incompleteness to which the vessels have arrived, have been placed before our readers, and it would be but a tedious recapitulation to enumerate them here. Suffice it to say that, following hard upon the echoes of the battle between the *Monitor* and *Merrimac*, in Hampton Roads, the English government fell to work with renewed energy upon some iron-clad ships long held in contemplation, and one of which, the *Warrior*, they had already completed. With that obstinacy of purpose which distinguishes both the individual and the nation, they turned out of their dockyards the *Defense*, the *Black Prince*, the *Prince Consort*, the *Resolute*, and, quite recently, the *Valiant*. All of these ships are of the high-out-of-water style of marine architecture. They have cumbersome spars and rigging; the glorious old tumble-home sides which jolly tars delight in, and uncouth bows and sterns. They require a wide field and great favor to maneuver in; so much so that were one of them to "wear ship" in an engagement, or require to turn, her adversary would think she had given up the battle in disgust and gone home; for no less than three miles is demanded by some of them to make a complete circle in! Excellent iron-clads! royal old ships! with four and five-inch iron plating, through which a Parrott shot flies like a bullet through brown paper—through which even the now much-despised Dahlgren eleven inch shot, with a charge of thirty pounds, and a range of something like eighty yards, tears its way like a marlin-spike through a twist of oakum.

They have other virtues, too: they belong to the sea; they have a hold upon it—a strong lien. They cling to the deep with a tenacity hitherto unreached by any other iron-clads afloat—they cannot be upset. Not they! Twenty-six and twenty-eight feet of water lies between the keel and the water line; and this, and more, must be the depth of every harbor and channel they visit, or else the ship goes aground. One would think that, with this draft, the vessels would be weatherly, and not roll; but they heave prodigiously upon the troubled sea. If accounts of recent English papers may be believed they almost throw their masts overboard! Clever ships for a pleasure voyage! Charming specimens of the mechanical talent and skill of the bold Britons. Some of them have Captain Coles's turrets, as he calls them, but which are, in reality, heavy iron shields of great thickness, backed up with the universal teak-wood (like unto which there is none other in John's opinion), and operated by machinery as delicate, compared with the duty required of it, as watch-work. In these there are some weapons known as Armstrong guns, and 68-pounders or 8-inch guns—very bad things to get in front of; principally used heretofore in India to blow Sepoys into atoms with.

Mr. Laird, M. P., whose conscience allows him to build *Alabamas* and *Floridas*, says that there are only two vessels fit for harbor defense in England; the Coles's ships draw too much water for that purpose, and yet are not able to cross the ocean. Here is a quandary, indeed.

The London *Examiner* says the Armstrong gun can't knock an old duck off its nest, and other papers vent even worse abuse upon the head, of the devoted inventor. Between the iron-clads that won't sail and cannot cross the ocean, and the "long range" Armstrong guns, the national defenses of England would seem to require a little attention.

If the reader ask how much has all this cost the bold Britons, we answer, only \$150,000,000! The scrap-iron trade of England will be enormously valuable a few years from the present time.

France is no better off. The Emperor has a lot of old tubs he calls "ships of the line." The *Nor-*