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Changes in the Value of Gold.—Wages for Labor.

From every quarter we hear of strikes among mechanics, artizans, and laborers for an increase of wages. The operatives of every trade, we believe, in the city of New York, together with waiters in hotels, coachmen, and laborers, have met in separate bodies, and have solicited an increase of wages. The movement is not confined to one city or State in our Republic, nor to our country itself. By the latest news from Europe we are informed of a like movement going on among the operative classes in Britain. There must be a cause for this general and simultaneous movement. Those who demand an advance of wages, allege that necessity compels them to ask for it. They state "that provisions and house rents have greatly advanced within the past two years, and to enable them to meet the common exigencies of life, their wages must be advanced or they will suffer." No exception can be taken to the truthfulness of these statements, but they do not give us the exact information respecting the real cause of this general movement for an increase of wages—the facts which they set forth for the necessity of an increase of wages are themselves but the effects of some cause. What is it? In our opinion it is the great increase of gold and the vast amount of it which has been added to the currency or coinage of the world within two years. There have been no general failures in the earth's fruitage for a few years past. Stones, brick, lime, and timber, for constructing houses, require no greater labor now than has heretofore been employed to shape and fit them for common use. The land still remains where it was before, and there are millions of acres yet unoccupied.—But bread, beef, houses, and lands, have increased in price, and by what cause? We believe the cause to be a depreciation of the value of gold as current coin.

The value of gold is only relative; that is, its standard must be the amount of anything else for which it can be exchanged. When it was less abundant more articles of another kind could be had in exchange for it. There was a time when our forefathers thought they were well paid when they received sixpence for a day's wages. With that amount of what we would call "small wages,' they could purchase more wheat and beef than we can do for twenty times the same amount of money. The value of gold or any current coin then, is only to be measured by the amount of the *necessaries* of life (they really bound its value) for which it can be exchanged. With every inordinate increase in the quantity of gold, or any current coin, there must of necessity be a depreciation of its value. This, as we have stated, we hold to be the cause of the recent advances in the price of provisions and rents in our cities.

We like to see every workman receive "a fair day's wages for a fair day's work." The more comfortable and respectable our people are universally, we certainly expect them to be more intelligent, happy, and moral. The wages of the operatives have in general been advanced in New York City, and we hope this will be reciprocated by those who have been directly benefitted. There is, however, a general prevailing spirit in all classes, to sell dear and buy cheap; hence it is often found that those who pay low and sell cheap are patronized by the very persons who are continually declaiming against low pay themselves. If manufacturers advance the wages of the operatives, let the operators not grudge to pay a little more per yard for the cloth which they purchase. The interests of the employer and employed are not antagonistical, they should be considered by both parties as *one*. It is, however, very difficult to raise the price of any article in general use, which has for a long time maintained a fixed price. Thus, although a newspaper proprietor advances the wages of his compositors, no increase is made in the price of his paper, because, in all likelihood it would decrease in circulation, and yet who can doubt but the said proprietor is as much affected with the high prices of which his workmen complain as they are themselves.

As the Scientific American is "the advocate of Industry," it becomes us to notice such movements among our operatives as the one we have been expatiating upon. On another page will be found some statistics of the great increase of our gold coinage—an increase so large indeed that we cannot but look upon a general increase of prices in many things as a certain consequence.

The World's Fair in London.

Our readers will find, on another page, an account of a meeting held in this city last week, by a number who were exhibitors at the World's Fair in London, in order to give public expression to their dissatisfaction respecting the manner in which the financial affairs of the American Department were managed. It appears that N. Dodge, is now an applicant for a foreign office—a Consul abroad—and the President is to be informed of his conduct at the World's Fair, in order that the applicant may not be appointed to any such office as the one he is seeking. We must say that some other period should have been chosen by complaining exhibitors for expressing their dissatisfaction, as it looks like a political personal movement, and some may say, "if Mr. Dodge had not applied for such an office no such meeting would have been called." It is right that the public should be informed respecting the manner in which our American exhibitors were treated by their own countrymen, who were appointed to watch over their interests. We do not endorse nor contradict a statement made in the Report of said meeting, because we have not received any information on the subject from those represented at the meeting. The accounts have been published in our daily papers, and if there are any statements not founded on fact, which militate against Messrs. Riddle and Dodge, they should be as publicly contradicted as they have been proclaimed. We know of no conduct so reprehensible as that of any person appointed by his government to look after the interests of his countrymen in a strange land, but who, instead of so doing, levies subsidies on them, and treats them in a heartless manner. Above all things we expect that one American shall be true to another when far from their native land.

There is only one case which we shall mention, as personally known to us, respecting the great amount which an American exhibitor had to pay at the World's Fair, to his American Commissioner. A gentleman with whom we are acquainted paid all the expenses of the articles he exhibited—having carried them to the Crystal Palace himself, and did not occupy more space than the half of a square yard, yet was charged and paid $37; his articles cost the American Commissioner no expense nor trouble whatever.

Our readers will remember that while we commended the Great Exhibition prospectively, we were cautious to advise those only who had an abundance of means to go there as exhibitors.

We believe it was Mr. Riddle who projected the New York Crystal Palace, but at present we have been informed he is in no way connected with it. We hope that the Committee appointed by the meeting referred to, will collect all the facts necessary, and publish them in a pamphlet, with vouchers for every charge made and every bill paid.

Events of the Week.

Mechanics' Society.—A letter from W. B. Robinson, of Chippewa, Canada West, informs us that a mechanics' mutual society for improvement has been formed in that place, and that at the opening of it, several articles were read with approbation from the Scientific American. The objects of the society are the cultivation of knowledge in science, practical mechanics, and chemistry. O. T. Macklin, proprietor of the foundry and machine shop in that place, has given the society the privilege of a room, and the use of such works as Tredgold on the Steam Engine, and a number of other useful works.

A rule of the society is that the members shall read an original article, and occupy no more than one hour every week, or select a good article from some mechanical work, the time of the meeting after that to be devoted to asking and answering questions, and giving opinions upon the subject.

The objects of this society are good, and we like the rules for acquiring knowledge, they are the best we could advise. We hope that perseverance will charaeterize the conduct of its members. We have noticed that many mechanics' societies have run well for a while until the charm of novelty was worn away; let no such conduct be exemplified by the Chippewa Mechanics' Society.

Red Cotton—Some new materials have lately been received in Manchester, England, from the south-west coast of Africa, among which is a fibrous substance sent by a missionary at Abeokuta, as a kind of *red cotton*. It came from a country further to the north, and is found in great quantities. It turns out, however, to be a species of silk, and is of a deep red color, but it has been dyed; probably it is a species of silk grass, like the kind which is so abundant in the East Indies, which is very beautiful, and will endure for a great number of years, but must not be brought in contact with steam or warm water.

Parkers' Wheel Cases.—J. Sloan, Esq., of Sloan's Mills, Ky., informs us that the air-tight cases for Parkers' wheels must not be of less area than ten times the area of the wheel issues under low falls, nor over fifteen times the area of the issues under high falls. There must at least be fifteen times the area at the discharging end of the air tight cases as the area of the issues of the wheel; the vent under the penstock must be similar. Less than this under the forebay is a serious disadvantage. This is for one wheel. For two or more wheels in one pit, the same proportions must be preserved. The inlet sluice must have the same area as the issues of the wheel. The discharge of the air-tight cases must be one inch below the surface of the tail water at the lowest stage of water when the wheel is standing.

Wrought Iron Car Wheels.—We have been informed that some of our eastern railroad companies have commenced employing wrought-iron in place of cast-iron car wheels. The problem to be solved is, whether, in the long run, the wrought or cast-iron wheels are the best; whether the wear of the one kind exceeds or not the expense of renewing the cracked and broken of the other.

Carbonic Acid Gas, its Uses.—A correspondent enquires of us, "how carbonic acid is obtained, how it is affected with heat, and whether or not carbonic acid gas engines have ever been employed." Carbonic acid gas is produced by pouring vitriol on marble dust or chalk. It is thus obtained for making *soda* water. It is also the product of the perfect combustion of pure charcoal. Its capacity for heat is the same as that of air, nearly one half less than steam. Having the same capacity for heat as air, it embraces the principle of being as great an economizer of fuel as air, and as it can be reduced to a fluid it presents mechanical advantages of a superior character. Sir Humphrey Davy threw out the idea that when carbonic acid gas was first reduced to a liquid, that its prodigious elastic force, under a low temperature eminently fitted it for moving machinery. Sir I. Brunnel took out a patent some years ago for a carbonic acid gas engine, in England, and Professor Salomon, of Cincinnati, secured a patent for an improved carbonic acid gas engine, about two years ago, in our own country. How he has succeeded we cannot tell. Carbonic acid gas can be condensed into liquid by a pressure of 40 atmospheres. This gas is so volatile that when reduced to a liquid, it exerts a pressure of 750 lbs. on the square inch at 45° Fah.—We believe that it cannot be employed so economically as steam.

American Rifles.

By the "London Mechanics' Magazine" of March 26th, we learn that a number more of trials have been made with Marston's American Rifle in London, all of which have given great satisfaction. It is about to come into extensive use in the French and British armies. The rapidity with which it can be loaded and discharged, and the self-cleaning operation of each cartridge make it the prince of fire-arms.

Silvering Glass.

"New Way to Make Mirrors.—The 'Prattsville Advocate' states that on a recent visit to the Rev. L. L. Hill, the alleged inventor of daguerreotypes colored by the action of light, Mr. Hill showed him a new way of making mirrors. He says: 'Mr. Hill took a small glass, such as Daguerreans use for covering their pictures, and in forty seconds it was transformed into a perfect mirror—perfect in every respect. We kept an eye upon it the whole time; the process was fully explained, and the result cannot be excelled. In his mode of "silvering glass," there is not a particle of the usual amalgam of tin foil and quicksilver, but it is composed wholly of pure and unadulterated silver. The discovery was made while he was experimenting on glass, with a view of adopting it to Heliochromy, never dreaming of its beautiful application to the manufacture of mirrors. The expense of manufacturing mirrors by this new durable method, will not, we think, exceed half the cost of manufacturing the kind now used; besides, they are always perfect, and no art of man can deface them, without breaking them to pieces. We hazard nothing in predicting that it will create an entire revolution in the art of making mirrors, and that in a few years, at most, there will not be a mirror, of the kind now used, to be found in the country.—[N. Y. Tribune.

It seems to us that the Rev. L. L. Hill is exceedingly fortunate in making wonderful discoveries. Here we have recorded in the "Prattsville Advocate," that the inventor of the Hillotype has made a new discovery, nothing less than silvering glass with *pure* silver; none of your tinfoil and quicksilver, but the real Simon pure article. We do not know how it is, but the Rev. Mr. Hill is a most lucky person to make so many discoveries. It appears to us that being a person of scientific taste, he must take the Scientific American, the real *mirror* of new discoveries; the editor of the Prattsville Advocate is also familiar with our columns. We therefore recommend them to peruse page 412, Vol. 3, Scientific American, where it tells of a method for silvering glass without employing the old amalgams of tin foil or mercury, but using a solution of silver. We also recommend them to read page 45, Vol. 6, Scientific American, where it states that a process was invented by Mr. Thomson, whereby "he discarded all the old methods of using essential oils, &c., and coated all his surfaces, curved and flat, with *pure* silver." We have seen his glass in this city, and very beautiful it is.

Mr. Hill may have invented a new method of silvering glass, but he is certainly not the discoverer of making mirrors by using *pure* silver only. It would be well for his fame to publish his method, so that he might establish his claim to originality in season. He will see by what we have said, and the references we have given, that the substitution of pure silver for the old amalgam in making mirrors is anything but new. We hope the editor of the "Prattsville Journal," has not overstated the value of Mr. Hill's discovery although he is mistaken about its age, so far as the pure silver is concerned. Inventors should be posted up in the history of inventions, and they cannot be so unless they read the Scientific American. Our editorial brethren should also be more careful to remember what they read in our columns, as we often find them describing things as new inventions which we had noticed years ago.

South American Rivers.

A very slight declivity suffices to give motion to water. Three inches per mile in a smooth straight channel, gives a velocity of about three mile per hour. The river Magdalena, in South America, running for one thousand miles between the ridges of the Andes, falls only five hundred feet in all that distance. The Rio de la Plata has so gentle an ascent to the ocean, that in Paraguay, fifteen hundred miles from its mouth, large ships are seen, which have sailed against the current, all the way by the force of the wind alone. They were gradually lifted up that beautifully inclined plane higher than the loftiest of spires, by the gentle influence of the soft wind, but for the gentle descent of waters, and the power of the wind, no vessel could sail up the gigantic De La Plata.