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HINTS TO INVENTORS.

The electro-deposition of metals has attracted the notice of inventors ever since the remarkable discoveries of Jacobi on the subject, and important applications of the knowledge obtained have been made; but there still remains a good deal to be done.

There are other metals, which, although they may not promise the same brilliant results as nickel, are, nevertheless, well worthy of careful investigation; and to some of these, we propose to call attention. To begin with, there is manganese, an exceedingly abundant metal, which has been successfully deposited in the form of powder by electrolysis, and has been separated from its amalgamation with mercury, has been reduced at a high temperature, and obtained as a beautiful white metal when alloyed with copper; and yet we practically know nothing about its condition when deposited upon other metals.

who prepared it, said that it could be cast at pleasure, in suitable molds, and he was not certain that it could not be annealed and worked the same as steel. The chloride of silicon can be easily prepared, and this is readily decomposed by sodium, yielding the silicon in pure condition.

Silicium in the form of powder can be obtained by fusing 15 parts silico-fluoride of sodium, 20 parts granulated zinc, and 4 parts of sodium, and washing the slag with hydrochloric and nitric acids. No way of depositing it by the battery has been invented.

The fact that silicium is not soluble in any acids, excepting a mixture of hydrofluoric and nitric acids, at once suggests its use for many chemical purposes.

It is a poor conductor of electricity, an exceedingly combustible substance, even in oxygen gas; and its melting point appears to be between that of iron and steel; but the point of fusion of its alloys, according to the law that obtains on this subject, would doubtless be considerably less. The combination of silicium with magnesium affords an alloy that possesses remarkable chemical properties, and may offer a new compound, to be used as an explosive agent.

The above are a few of the metals to which we invite the attention of inventors.

MORE ABOUT THE LABOR QUESTION.

The public must become accustomed to see many discussions upon this absorbing question. It is destined to occupy, possibly for many years to come, a prominent place among current topics of newspaper and magazine literature. To those who, as capitalists or as working men, are immediately interested in its permanent settlement upon an equitable basis, as well as to such as make social science a study, it must, until settled, possess interest second to no other likely to be agitated during the present century.

At present the attention, of those who have carefully watched the signs of the times, is especially called to the failure, or partial failure, of the courts of arbitration established in England, and from which so much was hoped by Mr. Hughes, their ardent promoter, whose eloquent address at the Cooper Institute, during his visit to this country last November, was quoted and commented upon in this journal at the time.

We also shared the hope that, through these courts, the difficulties and disagreements that have so long burdened the industries of the world would find amicable adjustment, and that their wholesome influence would bring precedents for the establishment of similar courts in other lands. We regret that the result has not justified our hopes.

At the last meeting of the Board of Arbitration and Conciliation for the North of England Iron District, this dissatisfaction was so apparent that Mr. Hughes deemed it necessary to make a long and eloquent address in behalf of the continuance of the system, admitting that its value had been seriously called in question, and that the method is charged with being both expensive and unsatisfactory.

In the course of his argument, that gentleman admitted that neither the working men nor the iron masters would abandon their organizations, but thought that their being brought "face to face from time to time" was not without sufficient advantage to pay for its cost.

We need not allude to special decisions and awards that have dissatisfied both employers and employed. It is enough that the dissatisfaction exists, even under the administration of such single minded and true philanthropism as that of Mr. Hughes and Mr. Mundella.

of the system, that, modified or abolished, would render it more acceptable, and we sincerely wish this may be found to be the case; for if, in such deliberations as have been held under this system, the differences have been seen to be so great that peaceable arbitration is not possible, what will the end be?

The persistent blindness of many to the magnitude of this labor question is a prominent feature of journalism. There are those who either ridicule, or treat in a jocose manner, events which are of the gravest importance, while others seem to think everything will all come out right, without social revolutions; or, if the latter occur, that they are far distant.

To prove that the demands of the trades' unions are arbitrary and unjust amounts to nothing. They have found themselves in a position to enforce compliance with unreasonable demands. Though only a few of their leaders and comparatively few of those who oppose them realize it, they are making war against the wages system.

Mr. William Taylor, at the Congress of the British Association, stated that out of 22,704,108 people in England, 8,144,000 do the work, and that they earn in the aggregate 267,000,000 pounds sterling, which, allowing them to work constantly six days per week, is equivalent to an average wages of twenty-one pence per day.

We think Mr. Taylor's estimate of average wages must be too small, but allowing the average to be double that given, we have in it matter for serious reflection.

When working men have the intelligence to figure out such a sum as this, and compare their pittance with the unearned wealth of the nobility and State-fed churchmen of Europe, need it be a matter of surprise that they are dissatisfied? How long need we expect them to remain quiet? What can courts of arbitration, that can only feebly affect their earnings one way or the other, do to convince such men that they are justly dealt with by society?

The above figures show that in England the part of society known as the working class are only a little more than one third the entire population. The history of the world has shown, however, that to perpetually oppress even a minority requires more than the might of numbers.

On the other hand it may be shown that industrial capital is really hard pushed as well as labor. In a remarkable letter, vouched for in the London Builder as coming from a genuine workman, appears the following paragraph relative to the condition of English manufacturers:

"Workmen and their leaders ought to know that, in the industrial race, the manufacturers are already closely run. In iron and cotton producing countries, the people are beginning to work the raw material. Any reader of the Times or the statistical abstract can see for himself the steady advance in exports which a few years ago were peculiar to England. Writers in the so called people's paper may ridicule the idea that other countries are making advance in competition with England. But it is a fact which no one can deny, that some engines and other goods have been imported into this country at a much cheaper rate than English manufacturers can produce them."

So it seems both labor and capital are hard pushed to feed and supply luxuries to the drones in the British hive.

Now if capital and labor could make common cause against the drones, instead of fighting each other, their combined efforts would bring about a better state of things, and the result of the present conflict will inevitably be in time a reorganization of society, in which producers and distributors of production will take pre-eminence over those who are at present fed from the public spoon. In the latter class are included all the paupers who live on homely fare in alms houses, those other paupers who wine and dine with liberal salaries in sinecure offices, those thieves who pick pockets in by-ways as well as those who rob the public purse by legislative jobs or fraudulent administration, gamblers in secret hells or public gamblers in gold and stocks, unnecessary middle men who insist upon clutching bread on its way from the producer to the consumer and cutting off their slice from the loaf, in short, all who, without doing anything for the general welfare, make wages low by making the necessities of life dear through their demand upon the productions of the industrious.

ANOTHER GREAT PUBLIC WORK.

The almost unknown countries which form the interior of European Russia have been, of late years, rendered accessible by long and well constructed railroads, undertakings which, in an empire to a great extent thinly populated and divided in itself by vast plains, could never have been made but for governmental authority and substantial assistance in