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THE DUTY OF USEFULNESS--A BUSINESS FOR EVERY MAN.

There can be no surer evidence of the decay of a people than disinclination to useful labor and supercilious contempt of the laborer. That this disposition is growing among us is sufficiently evident from the efforts of our thinking men in their affirmations of the "dignity of labor," their protests against luxury, and their denunciations of the indecent haste to get rich, shown in the mania for speculation, which makes the needs of a nation and the food of the poor, objects of its unholy lust.

But it is not our intention to write a homily, but simply to speak a few words in truth and soberness on a subject that intimately concerns every young man for himself, and every citizen for his country. Except in a state of society where the producers are serfs, thralls, helots, or slaves it cannot be degrading to work. That citizens of a democratic republic should look upon labor as unworthy a man, is as certain a sign of the hollowness of our democratic pretensions as is the eagerness with which we accept the senseless decorations and titles bestowed by crowned heads.

If the examples of some of the most celebrated men are of any value whatever, their lives would show that the knowledge and practice of a useful profession did not detract from their fame. Take for instance the life of the apostle Paul. The only liberally educated man of the first apostles, having been brought up at the feet of Gamaliel, and the son of a Pharisee, himself a Pharisee of the "most straitest sect," which corresponds to the L. L. D. and D. D. of our style, yet he was not ashamed to work at his trade as a tent maker. Has a man lived since his day who has exerted more influence on the progress of the race? Probably not; and yet while we do not claim that his occupation and trade as a tent maker made him what he was, we do claim that neither his knowledge nor practice of his craft militated against his success as a reformer.

But apart from the low considerations of present profit and the higher ones of future notoriety, there is a duty which every human being is bound to respect. If labor is not the normal condition of the race it is imperative on us now. Allowing that we are in a transition from idleness (or rather laziness), through the ordeal of labor to the Utopia where all we need shall come fully prepared to our hands, this transition state demands action.

But the normal and the proper condition of the human race is one of work, and it would not be difficult to prove that this condition of labor, as a price for enjoyment, is the divine law as well as the most effectual means of human happiness. There can be no more saddening sight than that of a man without an object in life except to compass his own personal enjoyment. No man purely selfish can be happy. The grand element of happiness is the consciousness that we are contributing to the comfort of others. He who lives for himself alone, from the contributions of others, misses some of the most exquisite enjoyments of life. This is not mere talk but God's eternal truth.

In a country like ours, where nature presents to us thousands of opportunities, it is worse than neglectful to refuse to contribute our share in their improvement. The father who

refuses or neglects to give his son a personal independence by furnishing him with a practical knowledge of a useful occupation, condemns him to a life of dependence and trouble than which death itself would be preferable. It is not necessary in all cases that he should be a farmer or a mechanic; the labor of the brain is as useful as that of the muscle, but the young man should be taught to labor either with muscle or brain. That brain labor is more honorable than that of the hands is a nonsensical notion, unworthy such a race as that which has for its mission the subjugation of a continent. The farmer and the mechanic--if they perform well their parts--are not only as useful but fully as honorable as the minister, the lawyer, physician, or editor. In every case labor is the price of success and the road to power, and in all cases that labor is a benefit to the world we live in.

A UNIFORM SYSTEM OF COINAGE AND THE PROPER RATIO OF VALUES.

The idea of a universal language has been for centuries a dream, or rather a prophetic inspiration of some of the foremost thinkers of the race; for there is nothing impossible in the idea nor improbable in its fulfillment. But human progress is by steps--or gradations--one thing at a time--and before we can welcome the beginning of an approach to a common language expressive of ideas which compass all the subjects upon which the human mind exerts itself, we must be content if we can see an agreement in a common method of interpretation on one single subject, that of money. If the love of money is the root of all evil, its proper use is the life of all progress, and whatever may facilitate that use is worthy attention.

A system of international currency has been proposed, and a convention agreed upon by the leading nations of continental Europe has recommended such a change in the value of the different national coins as shall make them, their divisions, and multiples, interchangeable without loss. It is not proposed to change the name or character of the present coins in use by the people of different nations, but only to equalize their values. The proposition of the convention is to adopt the French Napoleon as the unit of standard for gold, probably from the fact that it already circulates without difficulty all over the continent and is largely current in Asia and Africa. The standard of fineness established by the United States government is common also to at least eight gold coins in foreign countries. The difference in value at present is very trifling between five American dollars, one English sovereign, twenty-five French francs, five German rixhalers, one hundred Spanish reals, five Brazilian milreis, and five dollars of the Central and South American States; so the difficulty of equalizing coins of the different nations is reduced to very small limits. The English sovereign, if reduced in value only four cents, would be of the same worth as twenty-five francs, and the American dollar would have to be reduced a little over three cents to conform to the five francs of France.

The equalization of values thus assured, the numerical relation of the different coins one to another would seem to present no great difficulty. Notwithstanding the apparent advantages of some other systems, it would seem that none possess so many good points with so few objectionable features as the decimal. Lord Overstone advocates twelve as a standard of division and multiplication, and Mr. Nyström sixteen on account of its susceptibility of binary division; but it is evident that in either case other representative characters must be added to our present system of notation, which would for a long time prevent the adoption of such a system. Moreover, the manifest advantages of the French decimal system of weights and measures and its very general and increasing use, as well as the partial introduction of the decimal system of coinage in other countries beside the United States, would seem to designate this as the proper base for divisions and multiples of value. We presume it cannot be successfully disputed that our system of money is superior in convenience to that of any other nation. It follows the system of notation in use throughout the world, and gives less trouble to the foreigner than that of any other country. If a common system of coinage be generally adopted for facilitating monetary exchanges we sincerely hope that the decimal basis will also be employed to determine the relations of the coins.

THE METRIC SYSTEM AS A BRANCH OF EDUCATION.

The Congress assembled in Paris in connection with the Universal Exposition, for the purpose of considering the feasibility of selecting and recommending some system of weights, coins and measures, which if adopted, shall be uniform among all nations, have submitted their official report relative to units of measure and weight. In substance, the commission recommend the prompt substitution for the old system, of the metric system in all its integrity, and as it is practically adopted in several of the Western European nations. "This system," they say, "introduced and legalized optionally, cannot be at once rendered imperative to the exclusion of every other system. A certain delay is necessary for the change; and the different nations are alone capable of fixing its duration. Let us observe in the meantime that experience in several countries has proved that a too long delay does not have the effect of sensibly facilitating the accomplishment of this task. Thus it is desirable that Governments take, henceforth, the following measures, viz:--

- 1 To order the teaching of the metric system in public schools, and to require that it should form part of the public examinations.
2 To introduce its use into scientific publications, in

public statistics, in postal arrangements, in the custom houses, and other branches of Government administration.

"3. The commission does not consider, as appertaining to its mission, the duty of making standards the exact prototypes of those of Paris. The Government of each country will take upon itself the verification of each of these standards.

"The commission declares that the present report contains the expression of its deliberations and conclusions. It expresses a wish that different nations will yield to the solicitations of science and the manifestations of opinion."

Responsive to the first recommendation of the Commission we notice that in our own state the metric system of weights and measures has recently received a new and powerful impetus. At a recent meeting of the Teachers' Association of the State of New York, after an able discussion of the subject it was concluded that the system should be taught in the common schools and academies of the State. We understand that text books adapted to the system have been under preparation, and will be ready for use at the beginning of the next academic year. Several of the colleges also have added the metrical system to the ordinary subjects of examination for matriculation. If these plans are faithfully carried out, the final abolition of our present incongruous weights and measures is near at hand.

We suggest that the subject is already worthy the attention of business men--manufacturers and tradesmen. Are there not places already where the new weights or measures may be profitably employed? Is there not some article of commerce that may be advantageously prepared in accordance with the new scale? At any rate, some mathematical instrument maker will do well to prepare for sale, models of the new measures and weights. A metrical pocket rule, in our opinion, would prove a very lucrative manufacturing enterprise.

The American people are proverbially quick of apprehension, and if the subject be zealously agitated, the reform might be completed in a year. The metric system only needs to be explained to be appreciated, and with us the appreciation of a good thing is almost equivalent to its adoption.

THE COST OF ARTIFICIAL LIGHT.

The extortions and other sins of the gas companies are always popular subjects for contemplation and newspaper articles. These corporations are supposed to be conscienceless and inexorable; their voracity is never tempered by the slightest mingling of mercy for their miserable and powerless victims. Yet, seeing that we cannot help ourselves by bad temper, it is well occasionally to consider if there be not some advantage or comfort to be extracted out of the tyranny. We always advise to "give the devil his due," and we can afford to be as generous to the gas companies. Are we willing to give up the use of gas? What is the cost of gas compared with other illuminating materials?

Estimates of the relative cost of illuminating materials have often been made, and as prices are constantly fluctuating, they are always in order; the latest estimates of course will be most valuable. Prof. Edward Frankland has recently delivered a course of lectures before the Royal Institution of Great Britain, and from his sixth lecture we extract the following table. The prices in the original are given in shillings and pence, and these we have reduced to dollars and cents by assuming one penny as equal to three cents:--

COMPARATIVE COST of the Light of 20 Sperm Candles, each burning for 10 hours, at the rate of 120 grains per hour.

Table with 2 columns: Fuel type and Cost. Includes Wax, Spermaceti, Tallow, Sperm Oil, Coal Gas, Cannel Gas, Paraffin, and Paraffin Oil.

This table is based on the commercial rates of London. But the American prices are not materially different, and do not show any safe escape from the tyranny of the gas companies.

DANGERS OF THE GAS MADE FROM THE VOLATILE CONSTITUENTS OF PETROLEUM.

The volatile elements of petroleum called naphtha, gasoline, benzine, etc., offer such ready means for the manufacture of illuminating gas that attention has been naturally drawn to them as a cheaper material, involving less expense for apparatus and less labor for manufacture than the production of gas from coal or other substances. The extreme inflammability and readiness to explode at not excessive temperatures makes naphtha, benzine, or gasoline exceedingly dangerous substances. The lighter portions of petroleum are now largely employed for the generation of illuminating gas in isolated situations, where the ordinary gasworks are not convenient, and the ease with which the gas can be produced from the liquid serves to recommend its use.

That this substance is dangerous and cannot be made safe by the means usually employed and the care usually exercised is proved by repeated catastrophes. The latest is an explosion near Gloucester, Mass., July 29th, by which several persons were dreadfully and one at least fatally injured. The facts are, that at the date mentioned a fire was discovered in a house belonging to a gentleman whose residence was about two miles from the town, the fire being in the basement where was located an apparatus for generating gas from naphtha. An explosion occurred by which a number of firemen were dreadfully injured, one dying the next day, some so burned that recovery is impossible, and others dreadfully disfigured.

It would seem that no better direction can be given to the scientific and inventive talent of the country than attention to the properties and treatment of petroleum and its constituents, and devices for their safe manipulation and use,