CONTEMPORARY THOUGHT

In an article in the August Atlantic Monthly on "Reciprocity or the Alternative," Brooks Adams discusses the alternative feature of his subject as follows:

Americans are apt to reckon on their geographical position as in itself an insurance against war risks, on the principle that, like the tortoise, they are invulnerable if they withdraw within their shell. Such was the case formerly, but is not the case now. On the contrary, in European eyes, America offers the fairest prize to plunder that has been known since the sack of Rome, and, according to European standards, she is almost as unprotected as was Holland before Louis XIV.

America has an army of less than 100,000 men, with a short supply of officers, and no reserves either of soldiers or of material. At the mere rumor of war 100,000 men would have to leave the country to garrison Cuba, Porto Rico, the canal, the Philippines and Hawaii. More ought to go, if more could be obtained. But to send 100,000 men abroad would strip the Union bare. Even the ports would be defended by militia, and no reinforcements would be at hand to supply the waste in the tropics. Such garrisons could hardly stand against the overwhelming mass of troops which could be concentrated against them.

The Navy is even feebler, in proportion to the task which would be required of it. The United States has 529,000 tons of warships, built or building. France and Germany have 1,162,000, and France, Germany and Russia have 1,731,000.

Americans, furthermore, are disposed to assume that no coalition could ever be formed against them. Judging by the past, nothing can be more certain than that coalitions both can and will be formed against them, if they so behave as to make such ventures worth the cost and risk. Combinations always have been made, under such conditions, and probably always will continue to be made. To be opulent, unarmed and agressive is to put a premium upon them. An arrangement of this character was, in fact, contemplated in 1898, and is generally believed to have been abandoned only through uncertainty as to the neutrality of England.

Suppose an alliance of two or more powers, of which France were to be one: they would possess an admirable base in the West Indies, in Martinique or Guadaloupe, and also convenient bases in Asia. No station on the whole Asiatic coast is more commanding than Port Arthur, held by Russia. Fleets, therefore, of any size could be concentrated and supplied close to the seat of war, and Europeans compute that ships could be concentrated against us at the least in the ratio of two to one.

Our rivals believe that a couple of defeats secured by overwhelming numbers would settle the war; for iron-clads cannot be built in less than two or three years, and they calculate that two or three years of isolation, resulting from the loss of control of the sea, would produce enough domestic unrest to enforce acceptance of their terms. Those terms, they assume, would suffice to insure their future safety.

Such possibilities have not yet been maturely considered in the United States, because the change in the position occupied by the country is recent. Men do not immediately divest themselves of their old prejudices. Nevertheless, Americans are inclined to believe, and with reason, that their country is becoming the modern seat of empire. If this be so, they must accept the dangers and the cost of greatness with its advantages. All situations have their drawbacks.

From 1815 to the Boer War England claimed to be the financial capital of the world, and that claim was admitted. England, consequently, paid heavily to insure herself against attack. She not only maintained a navy supposed to be equal to that of any combination which could probably be formed against her, but, adopting free trade, she bought from all. France proceeded on the opposite theory; and yet, although France has kept up vast armies, she has been thrice disastrously defeated, twice actually conquered, and has never attained her end.

If a country would live in peace, experience has demonstrated that she must not be too grasping; for excessive greed makes her overthrow a benefit to all, and competitors act accordingly. On the other hand, certain races have felt themselves adapted to win victory in battle, and have prospered; if the American people, after due deliberation, feel aggression to be for their best interest, there is little to be urged by way of precedent against the logic of their decision.

If Americans are determined to reject reciprocity in all its forms, to insist on their advantages, to concede nothing to the adversary; if, having driven in the knife, they mean to turn it in the wound, they should recognize that they are provoking reprisals in every form, and accept the situation with its limitations. To carry out an aggressive policy in some security, the United States needs 300,000 trained men whom she can put in the field in 30 days, with an ample reserve of officers and of material. She needs well-fortified coasts and colonies, and an effective transport service. More especially, she needs a navy. Judging by the example of England, who has always done her best to make her friendship of value, 100 battle-ships and armored cruisers, equipped and ready for sea, would hardly suffice.

In a word, the experience of ages has demonstrated that alternatives are presented to aspiring nations in regard to the payment they will make for their prize. The one is the alternative of Cobden, the other that of Colbert. There is no middle course. Destruction has awaited the gambler who backs his luck; the braggart who would be at once rich, aggressive and unarmed. Such a man or such a nation puts a premium on spoliation. It is only necessary to reflect upon the fate of France in 1870, to accept this inference as true. America enjoys no immunity from natural laws. She can pay for what she takes, or she can fight for it, but she cannot have the earth for nothing. Sooner or later the inexorable tribute will be exacted from every predominant community, from the days of the grandeur of Babylon to those of the glory of London; for, since time began, no race has won for itself supremacy without paying a price in gold or blood to other races as ambitious and almost as powerful as itself.

UNIONIZING THE STEEL INDUSTRY.

If Capital Will Not Compete Why Should Labor Do So?

Review of Reviews.

What the employers had already agreed to as a reasonable scale of prices for the iron and steel workers in the union mills ought, said President Shaffer and his colleagues, to be the standard of pay for others, engaged in the same work. This, it was believed, would produce a uniformity and harmony of conditions that would make for the avoidance of future trouble. But the really important thing that President Shaffer and his colleagues say that they asked "was that the men be released from the contracts now binding them to belong to no labor organization and be allowed to join the association without being discharged." It was perfectly obvious, even to the casual looker-on, many weeks ago, that the Amalgamated Association was preparing to urge this point upon the attention of the United States Steel Corporation. The point was vital from the men's point of view, and sooner or later it was bound to come up. Such questions have to be dealt with as matters of large policy. The details of wage-scales ought, of course, to be left to the officials of the subordinate companies to work out with the representatives of labor; but the fundamental points of principle must in due time be considered by Mr. Morgan and the directors of the United States Steel Corporation. Mr. Lincoln said of the United States that this country could not permanently live half slave and half free. And some men say that the United States Steel Corporation cannot succeed permanently in its present policy of trying to carry on its mills on the plan of half union and half nonunion. In the end, they say, it must be one thing or the other, irrespective of the results of last month's strike. Some of the statements given to the press on the morning of the 15th by the representatives of the companies to the effect that they had merely been protecting their nonunion men from the tyranny of the Amalgamated Association were brought into question later in the day when it was discovered that certain nonunion men themselves were disposed to join the striking union men and walk out of the mills. It seemed to be the fact—though the truth about such things is not always easy to obtain—that some, at least, of the nonunion mills would have been unionized in very short order if the workmen had been allowed to have their own way. Everything in the situation made it hard to believe that there would have been any strike if Mr. Shaffer had allowed time for a more thorough investigation and discussion.

FAILURE OF TWO-PARTY SYSTEM.

Experience of United States Compared With That of Europe.

Albert Watkins in the Forum.

Since the demoralizing defeat of the Bryanized Democratic party at the last election, many former Democrats, notably certain former leaders of the Cleveland type, have persistently urged that the party should "get together," or be organized, along the old conservative lines. In all this contention, singularly enough, it seems to be assumed that it is not only practicable, but desirable, for the so-called Cleveland Democrats and those who espouse the present Bryan organization to work together in one party. It seems to me that this proposition is neither practical nor desirable; or, at any rate, that it would not be desirable, even if it were, at present, approximately practicable. In short, has not the bi-party system had its day, and would not a nominal or attempted continuance of it be illogical and unwholesome? Have not the divisions between hard-and-fast Republicanism, conservative Democracy, and Populism been sufficiently persistent and marked to leave no doubt as to the correct answer to this question?

The two great English-speaking nations and the self-governing English colonies have adhered, substantially, to the bi-party system, while in Germany and France there are many parties, groups, or wings under distinct names. In the present German Reichstag there are about a dozen of these party groups with a membership varying from only three or four to one hundred. The members of each of these parties or groups are elected on account of a few specific principles which they and their supporters regard as of paramount importance. They are not called upon to stultify themselves by subscribing to principles which they do not believe in, as is the case under the omnibus party system of this country and England. Our system puts a blanket morgage on truthfulness and on independent thought and action.

How vividly one still remembers the immoral spectacle of the delegates from the prairie and mining states going to the St. Louis convention, in 1896, shouting for silver, and coming back shouting for gold! The only explanation they offered, or could offer, for their absurd self-contradiction was the stupid shibboleth, "We are Republicans." Before the Chicago convention prescribed free silver as a panacea for the business depression which had clouded its economic vision and goaded it into desperate temper, a large number of Democrats were stoutly opposed to such a policy, and believed it to be immoral, inexpedient as a party measure, and menacing to business interests. Yet, after the convention had adopted the silver policy, most of the members of the party fell into line and declared that it was good. And, though the silver question became the vital issue of the campaign, many thousands of gold standard Democrats defended it, and excused their self-stultification on the ground that the declaration of the convention was party law, and that they were therefore bound by it. Such pernicious spectacles are an inevitable result of the bi-party system, under present conditions. In 1896 we heard for the first time, I think, the definite assertion of the dogma that men are made for parties, and not parties for men.

But for the assumption, based on conditions which had long ceased to exist, that it was practicable and essential to maintain the two-party system, instead of the fiasco and false pretense of the organization which resulted from the Indianapolis convention, there would have been formed there, in good faith, a party composed of "sound money" Democrats—excepting those who were prepared to make the movement a mere adjunct of the Republican party—and large numbers of disaffected Republicans who have stayed with their party only because there was nowhere else that they could consistently go, or no other organization with which they could efficiently work.

GREAT RICHNESS OF PORTO RICO.

Good Financial Condition—Promise of Industrial Development.

Governor-General Charles H. Allen, in Collier's Weekly.

Porto Rico is in truth the "rich port." Delightful in climate, beautiful in scenery, in every way healthful and attractive, it offers almost an "original proposition" in all things connected with tropical agriculture, and its people start out into the new business associations with the United States under the most encouraging circumstances. With not a dollar nor a bond to be provided for by sinking funds; with, as yet, not a loan to impair its credit; with its governmental affairs safely, honestly and prudently administered; with a surplus of over $700,000 in cash; and with a valuation of the island, made upon a most conservative basis, so that year by year, as resources are developed, it can be readily increased, it already shows a valuation of over $100,000,000, without one dollar of insular indebtedness charged against it. Nor does this amount indicate its full financial assets, for there is yet unexpended from the so-called "two-million-dollar fund" at the disposal of the President a balance of something like $800,000, so that its actual surplus subject to check, upon the date of the free trade proclamation, amounted to about one and one-half million dollars. And it should be said, to the credit of the people and the Administration, that civil government in Porto Rico has not cost the people of the United States one penny, as civil government in the island has been from the beginning entirely self-supporting.

Those who are contemplating an investment in a large way will first of all be interested in the sugar proposition, which at this time promises so much for the island. The island has some 2,000,000 acres of land, of which less than 500,000 are under cultivation. Of sugar lands there is a large acreage, a good share of which has never been cultivated, but is simply waiting for the coming of the pioneer. As a rule, these lands are along the sea on the north and south shores. The range of mountains running through the center of the island, from southwest to northeast, presents a lofty front to the trade-winds, blowing with great regularity from the northeast, and intercepts the clouds charged with rain, so that on the north side the moisture is more generally precipitated and the lands there abundantly watered. Sometimes, though seldom, on the south side, a crop has been lost by drouth, and for that reason lands in that section could formerly be bought at a lower price. Artificial irrigation has, however, changed all that, and this year the largest crop of cane per acre was obtained from fields in that very section, bought since the American occupation, and at a very low figure because of the lack of water. With the installation of a plant of driven wells, the production this year was 80 to 90 tons of cane per acre, as against an average in other parts of the island of 30 to 40 tons per acre.

The price of such lands is at present reasonable, but there is a decided upward tendency, which is not unnatural. The titles, as a rule, are excellent, but should be carefully looked into.

It should perhaps be said that while the normal production of sugar in the island for the past ten years has been 30,000 to 50,000 tons, this year, under the incentive given by the tariff, it has increased to about 100,000 tons. Now, with free trade with the United States, it is impossible to say what proportions it will reach. Experts who have given the subject great attention during the past year do not agree, but there have been presented locations where, in some 46 localities, central factories could be established, the development of which would aggregate a product of some 462,000 tons of centrifugal sugar.

What this development would mean to the island can be easily computed, and what it would be worth to those early in the enterprise is equally demonstrable. There are authorities who predict a future product of over 500,000 tons of sugar per annum for Porto Rico. When the fact is recalled that the entire sugar crop of Hawaii in 1879 was only 40,000 tons, and last year reached over 200,000 tons, it will be seen how great are the possibilities and how difficult it is to prophesy the result.

Another great advantage, in addition to that of soil, climate, water and labor, is the nearness of the market. No other sugar-producing country is so near, and this advantage need not be dwelt upon other than to mention the fact that the cost of freight from the Hawaiian Islands to New York is about $12 per ton as compared with the steamer rate of about $3 75 per ton from Porto Rico to New York. And this latter rate is liable to considerable reduction when competition arises, for the present rate of 16 cents per 100 pounds is quite as high as the rate now charged from Trinidad and Demerara, although the distance of the two latter ports is quite 1000 miles greater to New York.

PROFESSOR KOCH'S EXPERIMENTS.

May Turn Energy From Wasteful Attempt to Real Accomplishment.

Lawrence F. Flick, M. D., in Independent.

(Dr. Flick is the author of the monograph "The Contagiousness of Phthisis," which, published in 1888, attracted attention throughout the world. He was formerly president of the Pennsylvania Society for the Prevention of Tuberculosis and he is one of the founders of the famous Rush Hospital for Consumptives. Dr. Flick is now president of the Free Hospital for Poor Consumptives in Philadelphia.)

Until Professor Koch has given to the scientific world, through the medical journals, his views upon the subject of the possibility or impossibility of the transmission of tuberculosis from animals to human beings and from human beings to animals, we must hold in reserve definite conclusions or statements as to their importance. It is quite probable that the report of Dr. Koch's utterances before the International Congress in London, as given us in the newspapers, is incorrect. The newspaper account of his statement seems to make it out Koch has taken the position that human tuberculosis cannot be conveyed to cattle, and that bovine tuberculosis cannot be conveyed to human beings. The first of these two propositions is probably incorrectly reported. It has been proved, by many experiments, that human tuberculosis can be conveyed to domestic animals, both by inoculation and by feeding. The second proposition, that bovine tuberculosis cannot be conveyed to human beings, may be correct. It is in line with the opinions held for some years by many men. The fact is that, although the medical profession as a body has acceded to the theory that bovine tuberculosis can be conveyed to man, and although governments throughout the world have been acting upon this theory as though it had been demonstrated, there never has been a demonstration and there never have been many reliable data available in behalf of this view. The most zealous advocates of the theory have been at a loss for scientific data with which to support it; and it is rather remarkable that so much money should have been expended along lines of prevention based upon a theory which had so little scientific support.

Clinical observations have made it very clear that the spread of tuberculosis among human beings is almost entirely due to three methods of exposure:

First, intimate relationship for a long time between the sick and the well in the family circle.

Second, prolonged and intimate association between the sick and the well in places of business and of other employment, such as stores, offices, factories and workshops.

Third, the occupation of houses which have been occupied previously by persons afflicted with tuberculosis.

These three methods of exposure serve as the explanation of at least nine-tenths of all new cases of tuberculosis. When one bears in mind that, year in and year out, there are nearly the same number of deaths from tuberculosis, and that, for every case of tuberculosis there must be a number of persons who are more or less intimately associated with the tuberculous subject for a longer or a shorter period, one will be able to form some conception of the kind and amount of exposure that is necessary for a new implantation of tuberculosis. Momentary exposure in the streets, or by a visit to a consumptive, probably never gives a new implantation; and, really, comparatively few people are exposed in the sense of an exposure sufficient for an implantation.

The fact that we have known, for a long time, that these various methods of exposure are responsible for nearly all new implantations of the disease, makes it very easy to accept Koch's new proposition and demonstration, that animal tuberculosis cannot be conveyed to man, for we have found in the past that it has not been so conveyed. Even if the newspaper reports of Koch's demonstration are exaggerations, much good will come from it, because it places facts before the public which will counteract some of the mischief that has been done in recent years by the spread of doctrines, at least exaggerated, if not false, concerning the danger of using the milk and meat of tuberculous cattle. Many people have in recent years been really afraid to drink milk, and have thus deprived themselves of one of the cheapest and best articles of food because of their undue apprehension that they might contract tuberculosis through its use. The current discussion will necessarily go far to remove this fear, and will thus do much good.

An even greater good, however, will arise from the turning of the energy and money, ostensibly extended for the prevention of tuberculosis, into channels in which it will accomplish the object for which it is intended. If the money that in recent years has been expended for the condemnation of cattle and for the testing of cattle for tuberculosis had been expended for the establishment of sanitaria for the treatment of the consumptive poor, wonderful results would have accrued. We do know positively that every case of tuberculosis in its first stage is not contagious and is curable. If we had sanitaria wherein every case of tuberculosis during its first stage might be placed, contagion would not spread; for the patient would no longer be in surroundings where the disease could be conveyed to others, when the contagious stage supervened, if it ever did supervene.

BEST WOMAN GOLFER IN AMERICA.

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MISS GENEVIEVE HECKER, OF NEW YORK.

The winning of the Metropolitan championship in two successive years sufficiently indicates Miss Genevieve Hecker's place in the golfing world, for the class of play required to gain first honors is but little inferior to that needed in the women's championship itself.

Perhaps the most remarkable feature in connection with these triumphs is that the winner only commenced to play the game in the Autumn of 1898. So, although she has not completed her fourth season at the sport, she is very justly rated as a first favorite in the women's contest which takes place this year at Baltusrol.

For the first 12 months of her career she played at the Wee Burn Club, to which she then belonged, without taking instruction from any one; but naturally she did not fail to profit by what she saw going on around her. In the Summer of 1899 she took up the game seriously, her intention being to play in the women's championship at Bala. Accordingly, she put herself in the hands of George Strath, the professional at Wee Burn, and worked hard under him to improve her game. Her style, however, was already formed, and Strath made no attempt to change it, contenting himself with correcting some errors, and helping her out in her own way. The full, free swing, which is such a feature of her game, was always there, but practice and instruction enabled her to get a longer ball than hitherto. She is now one of the longest drivers in the country.

The result of her first ppearance in a National event was perhaps not all that was hoped for, but she qualified with 105 in the championship sixteen, in itself no mean achievement, and then she was put out in the first round by Mrs. J. Frankiln, by 1 up in a 20-hole match. But that her merits were recognized, despite this defeat, is evidenced by the fact that Golf, in its criticism of the play at Bala, picked her out as one of the six best players in the country. Last year, at Shinnecock, she qualified, being beaten in the second round by Miss Eunice Terry by 2 up and 1 to play.

It will be interesting to see whether she will have the good fortune to win the women's championship this year. On public form she is quite able to do so.—Golf.

RUBAIYAT OF OMAR KHAYYAM.

A Trenchant Criticism of an Anonymous Chicago Production.

Edgar Saltus in New York Journal.

There is a malady known to pathologists as epilepsy of the epiglottis. It manifests itself most oddly. The patient tries to speak and sputters instead.

We have symptoms of this complaint every time a new version of the Rubaiyat appears. We had a touch of it when the first dishwater was produced. We suffered at the spectacle of the succeeding slabs of veal and now nausea overcomes us again, for here is more drivel on an altar which should be sacred to every poetaster, however cheap.

The present sacrilege, an anonymous Chicago production, deserves every kind of reception except perusal. From the mawkishness of the binding on through the abomination of its letter press, down to the petty misdemeanor of its illustrations it constitutes our beau ideal of what bad taste should be.

But it will have its uses. Though just what, it would not be honest to state. Besides the point is elsewhere, or, rather, it is here:

A few years ago Ghas ud-din Abul Fath Omar Ibn Ibrahim al-Khayyam—Omar the Tentmaker for short—by whom the original rubai-y were written, was rumored to have been a myth evolved by the modesty of Edward Fitzgerald as a masque for the perfection of his own quatrains.

We knew the rumor was false, and heartily wished it were true. Literary mystifications are always endearing. Prosper Merimee produced a bundle of plays, which he declared he had found while rummaging through the Escurial, and which he attributed to an authoress whose existence was confined to his own imagination.

Owen Meredith also picked up some little things, which, however, he passed off as his own, and that, too, before they had been lost by their owner.

Incidents of this kind are but examples of the tricks of the trade. They amuse

NEW YORK'S TEMPLE OF FAME.

Not for the Dead, but for the Quick of Many Kinds.

W. D. Howells in Harper's.

The formal dedication of a hall of fame in New York City is an incident of our ingenious civilization which hardly any other can parallel.

It recalls a little the perfunctory fetes of the French Revolution in honor of the Supreme Being, and it brings dimly to mind several exemplary incidents of allegory in which mild, imaginary despots of the Orient or antiquity crowned a life of beneficence by the consecration of a temple to a virtue or an attribute.

We have got our hall of fame within less than two years from the time when the first rumor of it struck the incredulous as an effect of the national humor, and it seems that we have it none too soon, for without it the memory of 29 immortal Americans, of all achievements, would at this moment be exposed to the malice of the elements.

As it is, their names are now safely and handsomely housed against wind and weather in places to which they were chosen in a kind of electoral college, by votes varying from 50-odd to 97.

These soldiers, scientists, authors, sailors, statesmen, artists, philanthropists and divines are not every one of a celebrity that has penetrated the popular mind the most deeply or the most widely, and a plebiscite might have shown a different choice.

It might not have shown a wiser choice, and probably it would have failed in the matter of just aesthetical appreciation, the taste of the people not being of such divine quality as its voice. But what will seem to the outside world a fatal defect in the composition of the electoral college is that Time, once supposed of sovereign judgment in questions like that before it, was not apparently invited to its councils.

We can urge that in many cases Time had already done his work; but they could reply that Time wants a long while in those things, and that celebrities over 100 years old have sometimes been known afterward to perish utterly. Ozymandias, King of Kings, they could say was a case in point, and not the only case.

Still we can feel that for a new country the immortals elected to our hall of fame are not so bad, and there are several of them who would do credit to the oldest countries in the world.

The doubt that will remain with more minds now than in a former age concerns the usefulness of enduring fame. The pleasures of the famous person may be safely left out of the account.

If he is somewhere alive on better terms than he had here, terms that would allow him freely and frankly to own himself what he really was on earth, he is probably so much pained by the mistaken remembrance of mortals that he would rather be forgotten.

The worthier he is of remembrance the more he must shrink from it, and the question limits itself to those who remember him and how far his memory is a use or a joy to them.

Our hall of fame is not for the dead, then, but for the quick; for the young, the trusting, the innocent, who can be animated in their generous ambitions by the memory of high examples.

They alone can take the great and good on the terms fixed by their celebrity; but it may be a pity that the great and good, the greatest and best, could not be offered to their veneration on some other terms.

The old theory is that youth can be incited to greatness and goodness by a conception of these embodied in constant perfection by certain lives; but the tendency of modern history is to find such lives great and good in spite of a pretty constant imperfection.

It has come to be thought that the story of the struggles and the defects of great men is that part of their story which in the light of their prevailing success is the most significant. But the tablets in a hall of fame can give no hint of this to inexperience; and it is still questionable how far it is desirable they should.

Certainly it is not wholly desirable; and possibly the wisest thing would be to supplement the effect of the tablets by an intelligent and judicious ciceronage.

Carefully instructed vergers, after explaining who and what the famous men were whose names were spelled there, might give a succinct account of their faults and follies, so that any of the audience with sense enough to know himself fallible and foolish might go away hopeful of not being always and finally so, and not crushed with despair of their inapproachable virtue.

To one or two of the attendant group the verger might frown or wink an invitation to remain, and after the others had departed, might whisper to those chosen ears a few instances of error in which the virtuous are bound in a sad solidarity with the vicious.

Our day is now 24 hours; the distance of the moon is now 240,000 miles. When our day was about five hours long the moon was in contact with the earth's surface. It had just broken away from its parent mass. As the length of the terrestrial day increased, so did the distance of the moon. The two quantities are connected by inexorable equations. If one varies, so must the other. Whenever the rotation time of a planet is shorter than the period of revolution of its satellite, the effect of their mutual action is to accelerate the motion of the satellite and to force it to move in a larger orbit—to increase its distance, therefore.

The day of the earth is now shorter than the month—the period of revolution—of the moon. The moon is therefore slowly receding from us, and it has been receding for thousands of centuries. But the day of the earth is, as we have seen, slowly growing longer. The finger of the tides is always pressing upon the rim of our huge flywheel, and slowly but surely lessening the speed of its rotation. So long as the terrestrial day is shorter than the lunar month, the moon will continue to recede from us.

The Birth of the Moon.

Professor E. H. Holden in Harper's Magazine.

The earth revolves on its axis once in 24 hours. Millions of years ago the day was 22 hours; millions of years before it was 21 hours. As we look backward into time we find the earth revolving faster and faster. There was a time, ages ago, long before geology begins, when the earth was rotating in a day of five or six hours in length. In the remotest past the earth revolved in a day of about five hours. It could revolve no faster than this and remain a single unbroken mass.

It was at this time that the moon was born—separated, broken off, from the parent mass of the earth. The earth was then a molten, flattened sphere of lava. Its whole body was fluid. The tides, which now are small, superficial, and, so to say, local, were then universal and immense. They occurred at short intervals. The whole surface of our globe was affected. And the corresponding lunar tides in the fluid molten moon were indefinitely greater still.

Utilizing the Sun's Energy.

Professor Thurston in Cassier's Magazine.

The uncertainty which the engineer feels regarding the solar motor is due largely to the difficulties arising from the fact that the sun is not always available, even by day, and that it is entirely out of reach for power purposes for one-half of the 24 hours, and he has as yet no idea of practical methods of storage, either of the heat or the power, for use during cloudy periods, hours, days, and weeks even, when the engine cannot be kept in steady operation. It is, of course, possible that much improvement may be effected in the electric storage battery, and it is even true that great improvements in that precious device are apparently already in sight; but even the ideal and perfect battery, could it be realized, would probably prove so costly and so enormous as a part of this system of sun-power utilization, as to make its use practically out of the question in temperate regions where the sky is overcast so often that not over one-half the direct heat of the sun is each day, on the average, available, or in the tropics, where the rainy season makes it unavailable for months together.

The availability of sunlight and heat for the purposes of the engineer differ greatly in different places, and with every change of latitude, as well as from season to season. This variability is an enormous handicap where it is sought to employ this energy. The remark is attributed to Professor Langley that all the coal deposits of Pennsylvania, if burned in a single second, would not liberate a thousandth part as much heat as does the surface of the sun in that unit of time. Yet it is evident that our coal deposits, so long as they last, are worth more to us than all the available heat of the sun.

Knew How to Find Her.

"I'm sorry, Mrs. Callerton, but my wife is out somewhere and I don't know where. Still, of you will step into the parlor I'll get her in a minute."

"Why, how, if you don't know where she is?"

"Oh, I'll just light this cigar, and if she doesn't pounce on me in a couple of seconds it's because she is at the morgue."—Harpers's Bazar.

C. GEE WO, The Great Chinese Doctor

Is called great because his wonderful cures are so well known throughout the United States and because so many people are thankful to him for saving their lives from operations. He treats any and all diseases with powerful Chinese herbs, roots, buds, bark and vegetables, that are entirely unknown to medical science in this country, and through the use of these harmless remedies. This famous doctor knows the action of over 500 different remedies that he has successfully used in different diseases. He guarantees to cure catarrh, asthma, lung troubles, rheumatism, nervousness, stomach, liver, kidneys, female trouble, and all private diseases. Hundreds of testimonials. Charges moderate. Call and see him. CONSULTATION FREE. Patients out of the city write for blank and circular. Inclose stamp. Address THE C. GEE WO CHINESE MEDICINE CO., 122½ Third street, Portland, Or. Mention this paper.

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