



BUNDAY, JULY 20, 1906

Consider the stones of the meadow how they grow. Many a farmer firmly believes that stones grow both in size that stones grow by from may be made to grow by from Heat, simply heating and cooling seems to require just as much credulity. But the fact that the Franklin institute of Philadelphia has awarded a gold medal is a metallurgist for demonstrating this phonomenon should remove all doubt. The experimenter took a har of iron of known size and weight and repeatedly heated it to its critical temperature, which was 185 degrees Fahrenheit, and cooled it with the result that the size increased by the extraordinary amount of 45 per cent. The appearance and texture of the metal did not alter ernesibly during the expension process,

Even the plants take emethetics in the twentieth century. One of the professors of the Copenhagen university, whose came is withheld, has Vegetables estained results from the ap- Are Given piloation of anosthesis to Chloreform, pisnts. He first completely narotizes the piants, and then lays them aside in a condition in all respects analogous to bishargic siess, which lasts for a considerable period. On their revival from this state they begin to bud and flower with remarkable profusion. The known physiology of plants dose not explain the phenomenon, but those who have seen the results of the experiments with other and chloreform attest to the reality of the results.

May aluminium multiply and increase is the prayer of many a man of commerce.

The shortage of this value.

New Process ble metal and the large of for Haking forts to supplement present Aluminium.

Means of supply give importance to the experiments for commercially separating the metal from the baurite clay. Since the electrolytic method was shown to be feasible commercially the trade in aluminium has expanded immensely, so that the present output is estimated at 8,000 tons as compared with eighty-five tons seventeen years ago. The price has decreased to about one-eighth of the former rate. The uses for aluminium increase daily, not only in the motor car industry, but also in railway carriage work and in the easting not only in the motor car industry, but also in railway carriage work and in the casting of iron and steel, aluminium direct from the bauxite. Machinery of something like 50,000 horse power at present is required to operate the aluminium industry, but this shortly will be augmented. The new Betts patent, which originated in Uncle Sam's realms, indicates the direction wherein the industry again may be revolutionised. It is said that the impure alloy is used in a bath of molten cryolite containing alumins in solution, while cryolite containing alumins in solution, while pure aluminium forms the cathode.

John Chinaman of centuries ago had red hair and blue eyes. Prof. Gruenwedel of the Prussian exploration expedi-tion to Chinese Turkestan Chinamen

reports that they have found Long Ago

reports that they have found Long Age remains of persons belonging Rad Red Hair to a red haired, blue eyed race, evidently the founders of the temple in the Mingol caves, and bearing marks of unmistakable Iranian origin. A number of huge fron swords also were discovered, and numerous Buddhist freecoes containing many figures. The temple, in fact, seemed to have been a sort of Buddhist pantheon. Herr you Lecoq has made an ethnological collection, which includes numerous specimens of ancient pottery and quantities of embroidery in ancient Turkish patterns.

Why do ghosts wear clothes? asks Mr. Andrew Lang. At a meeting of the council of the East India company The Ghost at Calcutta one of the mem-Won a bers saw his own father.

New Hat wearing a hat of peculiar chape entirely unknown to the observers. In due time came a ship

from London bearing the news of his father death, and a large and well selected assort-ment of the new bats, just introduced to London stores. It was the hat worn by the paternal appearance. Dr. Hysiop of Columbia university takes the line that such cases his university takes the line that such cases as this, when the phantasm conveys the in-telligence of a change of fashion in hats and coincides with an unknown event, as the death of the father in England, cannot be disdeath of the father in England, cannot be dis-missed as hallucinations of ordinary nature without foundation or external cause. These visions correspond with facts unknown and unguessed at by the persons to whom the visions occur. Such cases are well attested in crystal gasing, as when a man sees cor-rectly a house of which he has not heard, or sees a known person wearing an unknown dress which he afterwards learns the person was wearing at that moment. There must hether of the living, or of the dying, or the dead. One solution is that the clothes of the spook are of astral matter like the spook himself, the astral matter being insibly subtle, and forming another wo pherein the spook dwells.

Twinkle, twinkle, little star. It is not your fault that we see you with five points.

W. Holts, a native of the fatherland, says that all it is the stars show precisely the Eye That same rays, but that in the Twinkles. case of the brighter stars the rays are pisiner and longer. He further remarks that the rays seen by the left and the right eyes differ, and that, if the head be turned, the rays are rotated in a corresponding manner. It is thus concluded that the source of the rays is not in the stars themselves but is the eye, the middle of the retina not being perfectly homogeneous in its sensitiveness. our fault that we see you with five points.

Growing gentuses by the surgeon's knife in promised by Parisian experiments. They have at least sured idlory. Surgery The idea was conceived that idlory was frequently caused by the premature union of the bones of the skull in infants where no consential career. infants where no congenital causes were apparent. Acting on this assumption, the French surgeons removed a portion of the bony covering of the skull on several patients, the idea being that the brain had no cases proved the correctness of the theory.

In some instances the results were marvelous. One idlet girl began to show signs of Another phase of this question, too, is that recovering intelligence the day the operation in many lines within the jurisdiction of the was performed.

Joseph Mowrana. private secretary he can give a more satis-



Callers Held in Outer Office.

QUIPMENT of a modern general office in Chicago, over the cost and equipment of ten years ago, sastly has doubled in the matter of furniture, mechanical contrivances facilitating intercourse, and in the maintenance of the color of serve of employes:

Wifteen years ago there scarcely was a big general office in Chicago which was not wide open from the entrance door to the desk of the president, or head official of the business. Today there scarcely is a great institution in which the machinery of something approaching an institution itself is not involved in the question of the caller as to whether the official sought will see him. It is worth the activation of a small organization of men and methods to determine whether the head of a great institution and methods to determine whether the head of a great institution and methods to determine whether the head of a great institution and methods to determine whether the head of a great institution and methods to determine whether the head of a great institution may find these assistants capable of dismissing satisfactorily to the callers is large per cent of these seeking a portion of his time.

By Hollis W. Field cory. Where he refuses the answer is final factory audience to the caller can be previous to five. In most depends years in the principal's prejudices, tasten. It is with the agent type of callers that the outer office in the principal's prejudices, tasten. It is with the agent type of callers the the assert a private secretary plan in the caller and years. It is with the agent type of callers that the content is a supplementally as a fit the call shall appeal to come of the large buildings signs are posted warm-on the business. To the present of the median open of the business head the secretary in the caller as to whether the bead of a great institution in the principal of the business and confidential men and methods to determine whether the head of a great institution may find these assistants capable of dismissing satisfactorily to caller a transmissio

Chicagoan Resents Red Tape.

In the present stage of business office evo-lution in Chicago there is a distince difficulty in dismissing the average caller at the ante-room door. Years ago New York was forced to the inspection system of the outer office and the New Yorker long has been more or less reconciled to an outer office finality. It comes hard to the Chicagonn in these late years to start out for a talk with the busy head of an institution, only to discover that the usher in the general office wants to know who he is and what is his business before the usher is ready to ask the private secretary whether the private secretary will ask the head of the institution if he will see the wait-

head of the institution if he will see the waiting Mr. Smith.

All this, however, is in the inevitable growth of business. In so other city in the world is it so easy for the average caller to reach so many general offices within so small an area as in the loop district of Chicage. With this proposition, it is reasonable to suppose that no other city under free and unquestioned access to business heads could offer such inducements to callers to appear to institution heads with trivial missions. The skysoraper was the first material as-It brought more people to the immediate vi-cinity of the big general office and it made the way to all floors easy of access.

Private Secretaries are Recessary.

Then, as partnerships broadened businesses and as corporate bodies succeeded partnerships, managements were so divided that an usher became necessary in the reception room in order to suggest which head of a department the caller would need to see. And as the pressure grew upon the chief heads of the institution, the necessity for private secretaries followed; and, with the pressure still growing, it became urgent that the business heads seek to share the disposition of the strings of callers with his right hand man, who had become more or less capable of a discriminating decision.

The net result today is that thousands of office callers under the old wide open regime of a few years ago are in open rebellion.

of a few years ago are in open regime of a few years ago are in open rebellion against the conditions which force them to take as final the decision of the private secretary that the head of the institution cannot

What would you like to talk to him about?" is the one question of the secretary at which this type of caller revolts and shows

temper.
The caller feels that this is impertines The caller feels that this is impertinence. He wishes to tell the head of the concern just what that mission is. But he forgets that in the evolution of the private secretary that person whom he wishes to see in person has been the one source of insistence that his secretary ask this one question! In many offices the private secretary would be reprimended if he should so to his chief with the card of a caller without taking with him the character of the interview which the caller seeks.

Enows the Employer's Frejadices.

Another phase of this question, too, is that in many lines within the jurisdiction of the

mission of the person more directly home to the person sought than the man on the name-less mission could hope to do.

In the pressure of office callers of all types on all missions the heads of the great offices everywhere have drawn the line of the im-possible. For example, some of the most generous of mea who are most open to sug-gestions of charities absolutely will not re-ceive such callers in office hours. They are in the position of serving a corporation in office hours, and with their charities a wholly personal matter, they insist on being ap-proached on a personal feeting. But the average caller on such a quest is most likely to resent a secretary's question as to why be wishes to see the business head, overlook-ing the fact that in the question and its an-swer at second hand the caller is saved much time and trouble, to say nothing of curt dis-missal in the end.

Sang Officials Easy to Sec.

According to the nature of a great business
ghe head of an institution needs this protec-Taking one of the great banks of Chicago as an example, the great bank of the tact and discertary to the president of a great bank has fewer callers turned away than any other man representing such vast interests as concern him. On the other hand, the president of a great railroad has as much need of the tact and discernment of his confidential man in dismissing callers as does any other man readily named.

Taking one of the great banks of Chicago as an example, the secretary to the presidential than the great banks of Chicago as an example, the secretary to the president of the great banks of the presidential man in dismissing the president of the great banks of of the

as an example, the secretary to the president estimates that he is not called on to diamies more than a possible T per cent of all the callers who ask to see the president. Of this percentage, too, the larger part

"crank."
In this office the invariable rule of the secretary is to ask the business of the caller, unless the person is known to him. The nature of the office suits and the furnishings and the personality of the secretary are sufficient to satisfy most of the crank visitors. As a man of bearing and ripecod features, with a modulated voice that commands attention to himself, both his question and his decison stand for finality. Or if there is persistence in the caller, he is satisfied to retire with a "Thank you" and the suggestion that he will call again.

Has a Patent Wagon Wheel

Has a Patent Wagen Wheel.

In this particular case one of the insistent callers has a wagen wheel which he has patented and in which he yet hopes to interest the bank president. After three or four calls in parson he was induced to write a letter to the president inclosing a prospectus of the invention. On the cecasion of his last call, however, when the secretary told him that he did not know if the papers had been passed on the inventor retired with

told him that he did not know if the papers had been passed on, the inventor retired with the emiling assurance that he would come again another time. When he does the secretary is now armed with the definite word of the president that he cannot consider the proposition in any light.

The private secretary to one of the great rallroads contering in Chicago hedges 25 per cent of the office callers from the president's time. The calle for the president, of this road are about as diversided in character and as representative of types as are to be found anywhere. At the same time in this large percentage of diemiscals the secretary is able to dismiss about as many satisfied callers so is possible anywhere cise. Requests for transportation and for reduced rates in travel actuate most of these people and on all of these quests the secretary is empowered to give or to refuse the privileges. Where he

binneif whether he is wise in dismissing the caller on the grounds of personal appearance, for the reason that unexpectedly the caller may have something which later through the medium of the mails comes to the head's attention and interest, with the accompanying explanation that the secretary has "turned him down" on one or two occasions. On the other hand, if sympathy appeals to the secretary and he goes against his rules, he is likely to suffer the reproof of his employer for bringing the subject into the private office. Not the least of a busy man's weaknesses may be shortness of temper, especially nesses may be shortness of temper, especially toward one of his trained employes.

Tact and Skill Are Required.

A calm exterior that shows neither cold-ness nor warmth, together with a ripened dignity, is one of the best working assets of the private secretary. Then all his tact and skill are required in order that he shall meet the disappointed caller on the best footing, the disappointed caller on the best footing, leaving him to the least mental friction at dismissal. The youthful secretary always is at a disadvantage in not looking the part of authority. He is handicapped, too, especially if he has a deck that is a mere table, unlittered by papers and where a possible typewriting machine is in evidence.

These things have been recognised in the evolution of the business office in Chicago. Riper men are succeeding to the position of private secretary. The private secretary's office is becoming a fitting antercom to the richly furnished private office of the institution's head. The work of saving the time of

tion's head. The work of saving the time of a big institution's heads rapidly is becoming a

Genius Is Always Rewarded; Society Pays Servitors Well. By George F. Tyrone.

There is a good deal of philosophy and no mail instinct of right perception in this individual desire of men for wealth. It is all well to ear that wealth is not the only thing in the world. I am far from indoming the distant, rulgar idea, too common, perhaps, among americans, that "money talks," that coin is the only thing, "or that "if you have money you've all right." You may have nother you've all right." You may have nother and you be the unhappingt man alway but the average man or woman, when when you've all the average man or woman, when the betturn of a Rothschild or a Rockefeller, inough wealth is wished for to accure one gainst gainful poverty, or to afford the case and the gratification of wholesome desire which every man and woman prises.

To him who wishes to be rich, and who is not fatuous enough to believe that he will one day stumble upon an Aladdin's lamp, one piece of good advice can be given: Do something which large numbers of people will think worthy a reward. In other words, society pays for real or for fancied service. Apart from an Aladdin's lamp, or from a legacy, which amounts to the same thing, society gives nothing for nothing.

This is an irrefragible law of economic life, and you cannot escape it any more than you can lift pourself by your boot straps. Service is the word, from the king to the plowman; and your service is rewarded in precise proportion as it is accumulically good for your fellow men.

"Unrowarded Genius" a Hyth, Many shallow thinkers criticise this posi-ion of economic science by calling attention to what they claim is unrewarded genius.
Johannes Gutenberg, the inventor of printing the greatest material and intellectual benefit perhaps of all time—was put in jail for debt, and had to fice from the wrath of the ignorant burghers who thought he was dealing in wisohorest. The first user of ansathetics died page. The greatest of the first European scientific discoverers were harassed and often put to death by paind governments, and were believed by the people to be limbs of fatas. Innumerable inventors have died poor. Mosart died in virtual want. And the lies could be extended ad infinitum.

infinitum.

But why was all this the case? Because society refused to reward men who had done for it great, useful, or noble services? Positively no. The men mendoned above had not done a service for society. In fact, they did what society, in their day, regarded not as a service but as an evil thing, or a thing of no value. As soon as society grew up to an appreciation of the uses of the things they did, society rewarded them with all the return in its power. It gave them menuments and praise. The moment society began to use the works of their genius, the moment their services became actual and not potential, society gave them of its gifts with a free hand.

Whenever a man does a great service to so-ciety, society-pays him cash. And it is often the case that society generously pays cash for fancied services, such, for example, as those believed to be rendered by certain in-surence officials, whose work could be done

by an intelligent office boy. And yet there are many men who will defend the elleged insurance grafters, and not unreasonably, by saying that the offices which they lik should be high miaried for the sake of more dignity, like the champagne lucebes which the Bank of England serves its clerks every day in the year, and all out of the depositors' money. What would the people of this country say if the clerks of the big insurance companies were given banquets in the office just for the style of the thing? Still, there is some good sense in the system, even if the president of the company spends money like water. It shows that the company is "cildade week," and the individual policy belies, like the Bank of England depositor, will see these will be tickled, in fact, if the corn, milester, will be tickled, in fact, if the corn, milester, will be tickled, in fact, if the corn, milester, accoursed him by the system.

Great Services Earn Great Person the other hand, the services does to be commonally paid capitaline who does to be serviced on the commonally paid capitaline who does to be seen or manufacture are united at the We say that for early to be seen a reliminate steel plant. Does he? In a few a There is a fiction to the early that he was a seen of the seen the seen of the seen the seen of the seen of the seen the seen of the seen of the seen the seen the seen of the seen the seen of the

Horwestan Eing an Example.

The Norwestans recently elected a king. We over here wonder why they had to have a king. We are inclined to laugh at a people that fancies it cannot get along without a king, and perhaps some of us would be willing to take the job and the salary it we could persuade the Norwestans that we are the gentleman (or the lady) they want. But we could not fool the Norwestans be any other nation, for a minute. What they wanted was not a man but a king, and to be a king a man must be able to render the be a king a man must be able to render the service of a king. If you want a pair of boots you won't take a hot mince pie form betitute. Shakspeare says:

A substitute shines brightly as a king Until a king be by; and then his state Empties itself, as doth an inland brook, Into the main of waters.

Into the main of waters.

The Norwegians wanted a man, an officer, who could render them royal service. Royal service means the highest kind of service conceivable. It means a service that unites a people in national ideals of honor, loyalty, love, faith, and hope. It means the embodiment in an individual of all the service that make a nation national. the embodiment in an individual of all the aspirations that make a nation national. It means in Norway, and in other monar-chic countries, what the fing means here. And the kind of a man that can render that kind of a sarvice must have belind him family traditions around which such id can cluster, or must have in him the per-sonal power of a Bernadotte, a Napoleon, or individual must have proved his worth by his personal service. If the loyalty be of a traditional kind, the tradition must be

Reward Proportional to Service.

Reward Proportional to Service.

The reward of service is, therefore, as a general rule, proportional to the importance of the service itself. As a general rule, for there are certain services which are not yet appreciated by society, although they are actually rendered. Supply and demand still have a good deal to do with reward. The labor which has built the cities of the country and all the great material works of civilisation has not been paid enough for the isation has not been paid enough for the service it has rendered society. Society pays the directing superintendent too much and pays the laboring man too little. That is the pays the laboring man too little. That is the case because society does not yet fully appreciate the services rendered. It pays each for them, but it will raise its reward as it learns better to appreciate labor. It does not pay enough reward to the educator as yet, because it does not realise how great is the service which is rendered to it by the humblest of educators. It underpays the clerry man and the doctor because the clerry humblest of educators. It uncorpays clergy man and the doctor because the clergy man and the doctor are generally in a false position. They cannot insist on their just applies they render connot be put into figures. It is too great to op-press in dollars and cents.

Traffic Solicitor New Railroad Worker.

A JOB in which the diplomatic wiles and expertness of an embassador are required, and in which the holder has to keep his eyes and ears open all the time and his mouth open to good advantage most of the time, is that of business to give, or who are capable of giving a picnic. It is their business to get advance vantage most of the time, is that of business to give, or who are capable of giving a picnic. It is their business to get advance information upon the proposed holiday and vantage most of the time, is that of business getter for a busy railroad. The smaller roads have little use for the services of men who do nothing escept travel-about the country getting business for the road. The little companies usually cannot afford to keep such a luxury, but no big railroad is without its corpe of diplomata.

Indeed, there is a regular diplomatic

intend to give, or who are capable of giving a picnic. It is their business to get advance information upon the proposed holiday and then secure the picnic for the road that employs them. Excursions for other purposes also are in progress now and the competition between the different roads for this business is sincers. The opening of the big summer amusement parks in Chicago has given the railroad business setters more work to do. They carry the bands to and from this city and handle all the big traveling acts. The regular theatrical husiness size is a big feature, and some of the closest friendships that exist in the ranks of the business pullers are those that axis between them and theatrical managers.

Little Ballread Graft in West.

Any reliable railread man in Chicago will say that the disclosures of corruption brought out concerning eastern railreads and con! mining companies obtain to a greater extent in the east than in the west. Favora are done in the west for hig shippers and in all probability they will be till the end of time, but so there as any business agent of any road ever will admit the competition among the roads for the business is carried on honestly and above board. It in the business of the diplemate in the freight traffic department

in the railroad organisations to keep in touch with big manufacturers and others who have extensive shipping and to get every bit of business that it is possible for them to get. One of the greatest evils they have to contend with is the slow dying rebate system and the habit that many shippers have of misbilling their goods to get a lower rate. The shippers also overload the care sometimes, and the railroads have to keep a preserve above. watch upon some of them.

Hire Regular Press Agents.

Diplomata in the passenger and freight departments get all the business they can while other diplomate perform other services for the corporations. Lately railroads have followed the example of the Eris in biring a regular press agent. Often one of the vice presidents is the man whose duty it is to make as good as impression with the public as he possibly can for his road. There everywhere is in the railroad world evidence of a discontion to deal more openly with the public as the characteristics and resource the discontinuate diplomate.

The result is that the railroad world evidence the aspectation which the result is that the railroad senter of the United Rusies and changes than it would be the discontinuated that the railroad center of the United Rusies in the changes than it would be the started than it railroad center of the United Rusies in the changes than it would be the started than it railroad center of the United Rusies in the changes than it would be the started than it railroad center of the United Rusies in the changes than it would be the started than the changes than it would be the started than the changes than it would be the started than the changes than it would be the started than the changes than it would be the started than the changes than it would be the started than the changes than it would be the started than the changes than the changes than the changes that the changes