INTERESTING DISCUSSION OF A BIG SUBJECT.

Ron. M. E. Ingalls, President of the Big Four Rattroad, Presents Some Important Facts That Will Interest

Hon, M. E. Ingalls, one of the greatest authorities on rallway matters, read a highly valuable paper at the recent convention of railway commissioners held in Washington, D. C. His wise words will be read with interest by all. The convention was called for the purpose of considering questions of great interest both to the railways and the people of the United States. Members of the Association of American Railway Accounting Officers were also present and were invited to take part in the discussion. Chas. J. Lindley of Illinois, was chairman of the convention. Ohio was represented by Railroad Commissioner R. S. Kahler and Chief Clerk Ed H. Archer, P. A. Hewitt, auditor of the Big Four, was one of the railway accountants present. Mr. Ingalls' address is here given as being a semi-official expression of the views held by railway managers generally, and as being also of general interest to the public at large:

"Mr. Chairman and Gentlement I am very much obliged for this opportunity of addressing you. I understand I have in my audience the members of the intertate commerce commission and the gen-



HON. M. D. INGALLS, PRESIDENT OF THE BIG FOUR. a body that is supposed to stand as an arbiter between railroads and the people as a friend of both; a body that ought to and does have great influence, and especially in reference to legislation regard-ing railroads. If this audience should audience agree upon any legislation in that respect that was needed, I presume there would be no difficulty in inductor conder congress to enact it into law, and believing as I do that it is essential to the public interest to secure legislation, I am pleased to have this opportunity of presenting my the reforms which I think are so vital We have reached a crisis in railway man-agener, when comething must be done if we would avoid disaster, not alone to the raffways, but to the material inter-

ests of our country.

in legislatures, in congress, and before courts, by the people on one side who believed that railways were public corperations and subject to control by power that created them; and, on the other hand, by officials of the railways who did not believe that such control was legal or practicable. State after state legal or practicable. State after state asserted its right. These rights were condecided from time to time always in favor of the people, under certain restrictions It finally culminated in 1887 in the enact ment of the interstate commerce law, and since then there has been hardly a day when some provision of that law was no under consideration by the courts or by fairly settled by the highest courts in the land that the legislatures of the states have control over railways with referto their local business, subject to pertain conditions, and that the congress the United States has the power to regulate interstate business. The supremecourt of the United States, which is the highest arbiter of these differences, has just decided that such control of states, or regulation, must be reasonable. and that rates cannot be reduced below profit where the railroads can earn eir expenses and a fair return upon

Railway managers had accepted the ation, and were endeavoring to obey interstate commerce law and adapt management to it when, in March, a decision was rendered by the sucourt which produced chaos and tid yed all agreements. It was practhat the Sherman anti-trust law. d, which it had not been supposed to railways, did apply to them, by ther the construction of that law by thourt it was practically impossible to make any agreements or arangements for the maintenance of tariffs. In the case best against the Joint Traffic associat in New York, this view has in New York, this view has may be lifted by the railways and it

lock the ation fairly in the face, and while I do t care to be an alarmist. I feel bound describe plainly to you the feel bound describe plainly to you the condition tow, so that you may understand the naisity for action. Never in the history dailways have tariffs been so little respet d as today. Private arrangements anumerstandings are more plentiful than cular rates. The larger shippers, the the potsible shippers, are obtaining advantes which must sooner or later prove the lin of the smaller and more conservative traders, and in the end will break up any of the commerdescribe plainly to you the more conservative traders, and in the end will break up any of the commercial houses in this buntry and ruin the railways. A madnes seems to have seized upon some railway managers, and a large portion of the freights of the country is being carried at prices far below cost. Other than the maintenance of tariffs the condition of the railways is good; their physical condition has been improved; their trains are well managed. improved; their trains are well managed, and the public is well served. If a way can be found by which sariffs can be maintained and the practice of secret rebates and private contracts discontinued, the future will have great promise for rallway investors, railway employes and the public generally. And here I wish to say that this is not a question which concerns railway investors alone. If was, you might say, let them fight it out.' It concerns over and above everyone else, the great public. One-fifth of are interested directly in our people railways, either as employes or employes of manufactories that are engaged in furnishing supplies to the railways. Can any body politic prosper if one-fifth of its number is engaged in a busin losing money? The railways selve the bile in so many ways that their pros-rity is closely interwoven with the osperity and comfort of the perity is closely prosperity and comfort of the ord nary rising continually against them.

people. One thousand millions of dellars were paid out last year by the railways from their earnings to employee of man-chartories in this country: 51,000,000 of passengers were carried, 12,000 millions were carried one mile, 780,000 or tons of freight were moved; 95,000 millions of tons were moved one mile. Do you think that any interest performing such immense service as this can be in difficulty and the balance of the country not feel it? Forty millions of dollars were paid out for public taxes. Over three thousand millions of dellars that have been invested in railways have carned no dividend for years. This is not 'water', as some populist orator will say, but good, money. These securities are held all through the land, and their failure to pay any return has brought disgrace uper us abread and suffering and want in many a family and community at home.

"One of the chief difficulties with the low as it stands today is that the punishment for private contracts and rebated is entirely out of proportion to the offense. The imprisonment clause was put in as an amendment to the intersinte com-mer e law, and I believe the commission and everyone who has watched its workings will agree with me that it has been a failure; more than a failure, that it has caused perhaps more demoralization than anything else. The public has not believed in it, it has been impossible to secure conviction, it has prevented the railway official who desired to be honest from complaining of his competitor whom he thought was dishonest. In fact, it has been what every law is that is not supported by public sentiment a failure What, in fact, is the manner of conducting business today? The radway official who desires to be horest and law-abiding sees traffic leave his line and finds the freight that he was carrying hauled to the warehouse of his rival, the earnings line decreasing and complaints from the management of loss of earnings, and in the distance he sees forming up the loss of his position. At the same time, the shipper who desires to elsey the law sees some rival selling merchandise to his customers at prices he cannot meet, and he knows very well that he is southing concessions from some railway to enable him to do this. The ruilway agent and the shipper who wish to obe the law sit down together and look it over. What relief is there for them? They can companie of their rivals, possi-bly convict them under the interstate commerce law and send them to the pen-Hentfary, but such action would down upon them the condemnation of the public and would ruin their business; for, as I stated before, the public does not believe in this severe feature of the law, and will not support anyone who enforces it. The result is, these men, in despair, are driven to do just what their opponents are doing-they become lawbreakers I have drawn no fancy picture; it is what is occurring every day

"It it wise, is it broad statesmanship, to leave a business as large as that of the railways one in which one-fifth, at least, of our population is engaged, one which affects the comfort and happiness of nine-tenths of the people—is it wise to leave it outside of the law? It is said that the most expensive occupation to the community is that of the burglar, he has to spend so much time and destroy so much to get so little. Is it worth while to force the great railway interests of

the country into the same position "Who opposes this legislation? First, certain people who desire the government to own and operate the rallways. and, others who wish that the interstate railway commission should make all rates. Third and lastly, certain railway managers who are opposed to any and all legislation and who object to any contrel, and believe that they should be left entirely alone.

"All of us who have any interest in our country, who desire its prosperity, are interested in the solution of this great question. It is not a time for the demagregue to howl about corporations. It is not a time to talk about the wrongdoings of railway managers. There are always some, in any business, who will not do and there always will be, but the great mass of railway managers to-day, I assure you, are as honestly seeking a soation of this question as are you or any member of the legislative body. I beof them that the two provis one I have mentioned are necessary and will lead to the settlement of this tion. If this body will join and heartly indorse this course and work for it, seconstishment can be attained. have unwittingly in this country applied to railway laws that it was never in tended should be applied to transportation companies of this nature. We have gone back and taken decisions that were wise a hundred years ago, when civiliza-tion was in its infancy and when the masses needed certain protection, have endeavored to apply these same principles to the great transportation in-terests of modern times. The courts, unfortunately, have followed in that line, Every business man, every statesman, knows that it is a mistake, that we have here an immense interest such as the world has never seen, and the principles which should govern it must be worked out in harmony with the age and the needs of this country. There should be no friction between the interstate commerce commission and the railways; should be none between the state commissions and the railways. been too much of a feeling with these bodies that the railways were against



P. A. HEWETT In the contest with rallways, in hem. the courts, the commissioners have drifted away somewhat from the ground they ought to stand on; that is, they should be the friends of the railways instead of their enemies, and should in securing the proper legislation, and the railways, in turn, should give their sup-port to make such legislation effective, I believe it can be done in no better way than by the true method I have pointed out. section; second, authority to contract and divide business. Either one of them would be of great advantage, but we ought to have both. There also should be such legislation as will give more force to the recommendations and orders of the interstate commerce commissione.s. Instead of trying to break down the commission the railway officials should try to build it up, should make the commission its aid and use it as a bulwark of strength in congress and in the states to beat back the tide of populism that is

THE CABINET.

thort sketch of His Life A Strong Is That Kind That Is Hidden by His Quiet Manner.



UDGE WILLIAM P. DAY, the new secretary of state. is an Ohio man. hailing from Canten. From the beginning of Mr. Mc. Kinley's political career he has not had a stronger friend than Judge Day. The indge is

a Canton man, pure and simple, although he is a native of the western reserve. His life has been spent there, except for his school and student life. His law training was derived from office study under the direction of his father, Judge Rufus Day, who was a member of the Supreme court, and in the Ann Arbor (Mich.) Law School. While a student at Ann Arbor he had charge of the law library, and then developed a strong taste for reading. As a member of the bar he has been noted for his coolness and his exhaustive preparation. He never went into a case unprepared. While a student Judge Day was on a baseball team, and his love for the national sport has not been destroyed. In home life he is very similar to Mr. McKinley, Except when called away by business or other duties, while in Canton, he could always be found at his home. There is no ostentation in his make-up,

NEW LIFE IN JAPAN.

thirty Thousand Children Enrolled in Its Sunday Schools.

The development of Japan is the wonder of the age. While the new regime nominally dates from the victory in 1868, the feudal system was prac-

gious work has been pressed with vigor in Japan, until there are nearly 400 the empire, including about 40,000 enrolled Christians, with over 30,000 chilscholars in day and boarding schools autumn published under Christian auss enormous amount of anenymous writpites. The great charitable move- ings by which she simply carned her ments, while by no means exclusively. livelihood. An eminent American sur-

HEATING BY STEAM.

Large Buildings.

steam has progressed so rapidly during set out in life with the resolve to add the past ten years that there are now something to the happiness or wisthree distinct systems well developed, dom of the world. Old age comes and all performing the same kind of serv- they are forced to feel that they have ice, but doing it under conditions that done no work that is recognized, or, vary materially. The oldest and most so far as they can see, that has been of widely known of these is the gravity large benefit to their generation. Their system, so called for the reason that labor has been given to support life. the steam generated in the boiler rises If any readers, old or young, of these up to the radiators, and, as it is condensed, the resulting water is returned heartening view of their work, they to the boller by gravitation, no appli- should read Morrell's account of his ance, other than the return pipe, being used for this purpose.

The next is what may be called the mechanical system, as mechanical carry the canoes over the land in orof the imperial troops over the Shogan means are frequently applied to re- der to cross the water, and so heavy duce the pressure of the steam in the tically in force until fully three years | system from that carried in the boiler later, so that the writer's observation and mechanical appliances are always der to make progress on the third, anmay be said to have covered the whole | used to return the water of condensa-

SUCCESSOR OF SHERMAN IN Protestant churches scattered all over CURRENT NOTES OF DISCOVdren in Sunday schools and over 10,000 Friend of the President-His Ability It is in an important degree because of the faith of the Christians that each individual stands face to face with his God that Christian individualism has gained such currency in Japan. In spite of their relatively small numbers they are found in the most influential or two ago summed up his college life positions. In the first parliament, out as "a study of the rudiments of a dozen of 300 members of the lower house, kinds of knowledge. When I began to thirtien were Christians, and among form these alphabets into sentences, them the speaker and the permanent college life was over." Men and wochairman of the committee of the men who have won reputation by good whole. There has been already a work in the world have given much Christian caldnet minister and a chief the same summary of their lives. "Any justice of the Sapreme court. The man," says Bondinot, "may be glad, Christians are found in disproportion- if out of all his work a half-dozen brief ate numbers in the Imperial universi- sentences last for a generation or two. ty, both among professors and stu- The rest of his time in the world went dents. Among the countless dailies of to fit him to speak those sentences, Japan, some six or eight are called "the George Eliot, in a letter to a friend, great papers." Of these so-called "great stated that the five books by which papers" not less than three were last she is known bore no proportion to the

STORY OF JUDGE DAY, asylums, etc. The distinctively red SCIENTIFIC TOPICS out in successive crops

ERY AND INVENTION

the Drudgeries of Life Summed Up. All About the Disease known as the itching. "Hives" New Yoy for the Navy An Invention for Goffers.

Effe's Drudgeries

An "honor man" at Harvard a year are yet largely under Christian control | geon in an address to a medical school said, "Very few successful men can expect to perform more than one or two great operations in the course of Something About the System in Use to a long practice. The bulk of work eught to be a training for these opera-The art of heating buildings by tions." Honest, intelligent lads often lines are inclined to take this disjourney through Upper Canada, "Our way lay across small lakes and through long stretches of forest. We had to were they that I grumbled much at having to toil hard for two days in ortil I remembered that the trudging under the load brought me to my journey's end as much as the floating on the water." There are a good many "carries" in each human life, days and years of heavy labor which go to earn the means to live. But if our faces are turned toward home, every step under the burden brings us surely nearer to it.

Arizona's Petrified Porests.

The secretary of the interior is considering a proposition to make a govarnment reservation of the petrified forest in Arizona. It is said that the wonderful collection of silicified tretrunks of which the forest consists is being rapidly despoiled for commercial purposes. The petrified forest is in Anache county near Holbrook. Not only stumps and roots, but entire tre trunks of great size are found converted into hard agate, preserving the form of every cell and fiber. Some of the sections, cut across the trunks, are four feet in diameter, so that polished tone for tables are made out of a single piece. These exhibit, in the most exquisite manner, the grain of the original wood, beautified by a brilliant display of interblending colors. A company has been formed to mine the forest for stone to be used in architectural and decorative work; and the only way to save this wonderful natural curiosity, which, as far as known, has no equal in the world, is said to be by turning it into a forest reserve.

For the Golf Enthusiast.

Every one knows that a "caddie" is an indispensable adjunct of the links, but very often the small boy to serve in this capacity if not available, particularly when one is enjoying the delights of golf on an improvised course, when away in summer or in the country. When the genuine article is not to be had, however, the golf enthusiasts have to content themselves with an automaton caddie. This is a device which, when the lower end is placed on the ground, opens out automatically and folds up when it is lifted for carrying. The contrivance is very light and is provided with a bag to hold balls and a generous allowance of space for the sundry sticks required.



A sling can be used for carrying the automatic caddie when a boy is employed.

Hives.

This most distressing cruption, known medically as urricaria, and popularly also as nettle-rash, hardly needs a description, for there is scarcely any one who has not at some time in his life suffered from it more or less. It consists in the sudden appearance; t one or more puffy swellings on themselves especially honored by my skin, hard, and of a whitish or pinkish color, which itch and burn and abb. "ed by nearly all members of the

> These wheals may be no larger round than a pea, or they may be of the size of a silver dollar or even larger. They usually last only a few hours of a few minutes, but may persist for a day or

or different parts of the

The wheats generally tapidly as they come, as disappear every sign of except, perhaps, the mar ger nails which the suff into his sk n in the vain o

The cattest of bives arbut in the greater number they are referable to some e Some people can not eat s any kind without paying for discretion by an attack of others are similarly affected kinds of berries or nuts, or ! drugs. Irritation of the skin h cinal applications, such as a ledine, by poisons, such as the nettle, or of certain insects, or underslothing, as well as the of a very low temperature, ma produce an eruption of hives.

It is possible to discover the and to remove it, the treatme urifcaria becomes a very simple ter. While the eruption lasts the ing and stinging may be relieved. what by lathing the parts in a solution of bicarbonate of soda, b househeld ammonia, alcohol, or v gar and water

A useful application is carbolic a one part in thirty parts of water, w a little glycerine. Sometimes an ofment containing carbolic acid bor or boracic acid, zine or chloroform very grateful,

New Toy for the Navy.

Here is a toy for the navy-one which some of the navy's men would enjoy playing with in the neighborhood of a Spanish flotilla. It is a Dregges-Schroeder six-pound rifle. It can fire thirty-three shots a minute and fits projectile can pierce three inches of strei at a distance of three miles. It is the new gun which has just been placed on the revenue cutter Gresham. It will be in charge of Gunner Finn. who has been on the old cutter Andrew Jackson and on the Gresham for tweuty-six years. The Gresham has only one six-pounder rifle, but she could easily increase her armament by four



or five more. She has a speed of twenty-one miles an hour. But her ef weapon of defense is ber torpedo

A Projectite's Gain of Speed.

Recent experiments with improved instruments for measuring the velocity of projectiles have shown that the speed goes on increasing after the missile has left the mouth of the cannon. Laving the muzzle with a velocity of about 1.474 feet in a second, a projectile has been observed to increase its speed to about 1,689 feet per second within the first six feet. It is only after having traveled about twentyfive yards that the projectile's velocity becomes reduced to the speed that it had on leaving the muzzle. This is ascribed to the impulse of the expanding was being felt for some distance beyond the cannon's mouth.

Is It a Forming Sun.

Remarkable photographs of the "ring nebula" in the constellation Lyra have recently been made at the Meudon observatory, near Paris. These pictures. show a great deal of diffused nebulous matter inside the ring, but none outside, while in the center appears the image of a star. This star can also be seen with a telescope. But the drawings of the ring nebula made by Herschel in 1833, by Lord Rosse in 1844, and by Trouvelot in 1873, show no star there, and Monsieur Rabourdan thinks this may indicate that changes are going on in the nebula; such, for instanceas the formation of a solar body within the ring.

Distance of the Dog Star. Dr. David Gill, whose measures of

the parallaxes of the stars, by meaof which their distances can be cale lated, are among the most accura known, has recently deduced anew t results of his observations of Sirfus. dog star, which is the brightest star the heavens. He thinks we may n regard its parallax as satisfactorily of termined at 0.37 of a second of a This makes the distance of Sirius if miles 51,000,000,000,000. In other words the dog star is nearly five hundred and fifty thousand times farther from the earth than the sun is.

A Curious Flower Wreath.

Miss Elizabeth Taylor, writing in Popular Science News of the plants and flowers of Iceland, describes a curious sight which she witnessed in the lava fields near Reykjavick. Noticing wreaths of steam issuing from the summit of a small volcano, she climbed up there, and found a band about two feet wide, of beautiful plants, bearing large flowers, encircling the interior line of the crater. The steam warmed the flowers and the rim of rocks protected them from the cold winds without.

What Locusts Will Not Eat. 't is said that the castor oil plant animal world; that moles ma driven from a lawn by planting castor beans in it, and that neith terrible "srmy worm," nor the stroying locust will eat it.

Baggy trousers show a pre-



SECRETARY OF STATE DAY.

period of the history of the new government, says Leslie's Weekly. There can be no doubt that there is a new life in Japan. The most striking evidence, perhaps, is to be seen in the new navy, which is attracting so much attention. Another evidence of the new life is seen in Japan's political reforms. Less than thirty years ago there was a feudal government under which there was little room for personal freedom. All below the military class, constituting about 5 per cent of the population, had relatively few rights. They could not even petition for the removal of abuses except at the risk of immediate death. Now they enjoy a constitutional government which has already broadened out far beyond the limits prescribed by its written charter, and which exhibits a decided tendency toward the British system. A judiciary has grown up before which even the highest officers of state may be brought at the instance of the humblest citizen. Japan's system of education, re-enforced by a practically free press, has given a degree of homogeneity to the nation which most foreign observers fail to realize. Japan is not a Christian nation-far from it. The Christian popalation is proabbly not more than onehalf of 1 per cent of the whole; yet what may be called, and is called even by many non-Christian Japanese. Christian sentiment is acting strongly upon every department of life. It has produced an eleemosynary movement of remarkable power, which deals with many and varied social problems. It is represented by the strong and most admirably organized Red Cross society, a flourishing temperance society, a prison-reform league, college settlemeres, hospitals, dispensaries, orphan | nitely fixed.

tion from the return pipes of the system back to the boller. These may be in the shape of an automatic steam trap, or a pump and governor, as may best suit the conditions. The third is the exhaust steam system, in which the heating is done by steam that has been used to drive engines or pumps, and that would be of no further service if it could not be utilized as heat In this system mechanical appliances are also used for controlling and direct. ing the steam through the system.

R. Talbot Kelly writes an artice entitled "An Ar.Ist Among the Fellaheen" for the April Century. In speaking of the kindliness of the Arabs, Mr.

Kelly says: "Here is an instance of his willingness to oblige. I was making a sketch of the village cemetery and wanted only a funeral procession to complete my study. I remarked to the old man: What a pity there does not happen to be a funeral going on, so that I might put it in! His reply took me by surprise, for, jumping up, he said: 'There is a man ill in the viilage, and he must die soon; I'll go and hurry him up!' And, sure enough, he bustled them all so much that an hour later my sketch was complete, ad-I the man safely interred! And I bel'eve that the bereaved family considered interest in the caremony!"

Underground London contains 3,000 miles of sewers, 34,000 miles of telegraph wires, 4,530 miles of water mains, 3,200 miles of gas pipes, all defi-

Accommodating Mourners.

What Lies Beneath London.

sting intolerably. more. Sometimes they keep coming