What Shall Be Done With the Corn Crop?

Store It in Air-tight Steel Reservoirs Is the Suggestion of a Chicagoan.

From the Times-Herald.

The corn crop of the United States this year is estimated at the enormous quantity of 2,500,000,000 bushels. How can this colossal crop be saved for market and for food? Under present conditions of harvesting and storage it cannot be done. If the yield is abnormally heavy, the loss will be great in proportion. For as corn is the most valuable, so it is the most susceptible to deleterious influences of all the cereals, and the least valuable when vitiated through these influences.

Because of the ease and abundance of its production in this country, little care is taken for the preservation of corn; no other cereal is so thoroughly neglected after it has been obtained from the soil. Thrown carelessly into rail pens or cribs, either imperfectly covered or not covered at all, it becomes wet, sour and musty, and is rarely preserved in a condition to make sweet, wholesome food for man or beast. Out of a total of 4,219 cars of corn received in Chicago during the first half of December, 1894, only 212 graded up to No. 2. Even when corn comes to the commercial elevator in fair condition, it seldom remains so; through the multiplicity and crudity of handling, it is unavoidably exposed to moist air, changing temperature, and contact with vitiated grain, and becomes bitter in the germ, more or less musty, and incapable of producing pure, sweet meal.

In the last nine years, according to government records, an average of 15 per cent. of the corn crop of the United States was entirely unmerchantable. This estimate is not restricted to corn used for human food; so restricted there must be added fully one-fourth of the corn sold as No. 2, and all below this grade. As ordinarily kept in wet, musty elevators, the degeneration goes on steadily from month to month, and even No. 2 corn will not grow if planted the next spring after maturing. Corn that will not germinate is not in good condition for food. In fact, until our cereals are kept in air-tight receivers or reservoirs, there can be no perfect preservation.

To Preserve Food Products.

Absolutely air-tight steel storage, it is claimed, is a complete solution of the problem of keeping corn and all other food products for any length of time without deterioration. Lyman Smith, of this city, has perfected a system of air-tight steel storage and pneumatic transfer, which he claims not only cheapens the saving of grain and other perishable commodities beyond all other methods in use by which the products of the earth may be kept intact, but also decidedly cheapens the transfer. The cereals at the same time are not only free from decay, but absolutely safe from injury by fire, weevil and other contingencies, and expense for insurance is entirely obviated.

The idea of air-tight storage for preserving grain and other food products seems to have been obtained from the ancient Egyptians. Edward W. Serrell, the well-known civil engineer of New York, has written Mr. Smith that some forty years ago his mother planted wheat in her garden which was taken from the stomach cavity of an Egyptian mummy, brought to New York for the Stuyvesant Institute Museum, and this wheat—probably 3,000 or 4,000 years old—grew and ripened, and the next year was planted again and grew and ripened. Then a quantity of this wheat was sent to the west for seed; it was grown in Oregon, and was known as the mummy wheat; it headed heavier than any ever before seen there, and though it was of dark color, made very good bread.

Seeds From Egyptian Mummy.

John G. Judd, a printer of Washington City, has informed Mr. Smith of a similar experience with seeds taken from an Egyptian mummy. He said: "It is nearly or quite fifty years ago that a mummy was unrolled from the air-tight covering in Exeter Hall, England, and within the rolls of the cloth was found a number of small round seeds, some few of which I obtained. For a time they were kept as a curiosity only, but a relative begged them in order to test them. They were placed in the hands of a gardener, whose garden was on the road to or very near Hampstead Heath, and whose name, if I ever knew it, I have forgotten. The seeds germinated and turned out to be very fine sweet peas. I saw them in full bloom, and they matured seed, which was sold by the gardener next season as a curiosity."

In the saving of the cereal grains the ancient Egyptians, perhaps 4,000 years ago, understood the process of sealing securely in air-tight vessels or in rock caves. With the decline of ancient civilization the art was lost, and not until the present century, through scientific exploration of ancient ruins, was it recovered; and not until the last few years was the idea reduced to practice in the sealing of perishable products in air-tight jars and metal cans, by which both air and light were excluded; so that now we are able to keep such products in their natural state from year to year.

In the case of cereals no progress has been made in our great elevators, so far as preserving them in good condition is concerned; in handling vast quantities of grain the aim has been simply to keep pace with the necessities of transportation by rail and water. No advance has been made in saving from deterioration over the farmer's old-fashioned cribs and granaries. But now, with air-tight storage reduced to a practical system within the reach of all, great things in the saving of crops may be expected.

The Cereal's Great Value.

When considered from almost every point of view, Indian corn at its best is found to be the most valuable grain in the world. It is more prolific than any other, one seed often yielding more than a thousand at a single planting. It contains oil, starch and sugar, the fattening properties, in greater degree than any other cereal. With these principals are combined a sufficiency of nitrogen compounds to satisfy the ordinary needs of man and beast.

All grains require a period for maturing after being harvested. Corn requires three months or more to ripen after being husked from the stalk. Therefore corn and all other food cereals should be thrown in air-tight receptacles as soon as harvested; by exclusion of the air they will keep perfectly sweet and sound, and with a living germ, for any length of time, retaining their normal moisture. Corn is in its best condition for food at the time of ripening, if it has been kept from deterioration by natural or artificial causes. But whenever, from any cause, a food grain has become bitter, sour, musty or infested with weevil, it is not only unfit for food, but positively dangerous to health.

How the Indians Kept It.

The aboriginal American was taught to bury Indian corn in the earth below the depth of the frost. The frozen earth above excluded the air, and the corn came out in the spring sweet and containing its full normal moisture, every grain ready to germinate when planted in the moist earth as the temperature rose to the proper degree for planting. In the dry climate of ancient Egypt the cereals were kept intact by sealing them up in air-tight jars and other receptacles. Herculaneum and Pompeii, uncovered in recent times, disclosed lessons taught by nature centuries ago and forgotten by man, out of which have grown the modern canning industry in all its varied forms. These methods are all effective, but so expensive as to be inapplicable except to a comparatively limited extent.

It is at least practicable to lay our great American cereal pure and undefiled in the marts of the old world; and when it becomes known there in its prime, the demand for it must increase with wonderful rapidity, and its consumption grow to colossal proportions. The average corn crop in the United States is about equal in number of bushels to the average wheat production of the entire globe. Corn furnishes food for man in a greater variety of forms than any other product, so long as it maintains its purity. Hence the importance of perfect preservation. This can be accomplished by air-tight storage. Hitherto its accomplishment has been sought by the canning process, which, it is said, is too expensive to be practicable except on a limited scale.

The silos or reservoirs are built of homogeneous steel plates lapped and double riveted throughout, in a manner that renders absolutely air and water tight. When sung partly or entirely in the ground, these silos furnish ideal conditions for the preservation of ensilage, including a low and even temperature, seclusion from air, light and moisture, fire, insects, vermin, and other injurious influences, and consequent immunity from heating, fermentation, molding, oxidation and evaporation.

SILVER IS HER FRIEND.

While Gold Countries Are Passing Through a Period of Depression Japan Is Flourishing.

W. E. Curtis, in Chicago Record.

Miyanoshita, July 24.—Although there is a practical illustration of the single silver standard system in national currency in Japan, which affords the deepest interest to every thoughtful man who comes here, I have said very little on the subject, and that has been only quotations from others, because I wanted to study it from all possible points of view. It should be said in advance for a proper understanding of the situation that Japan attempted to maintain a single gold standard when the government was reformed some twenty years ago and failed. She then tried bimetallism, and theoretically still adheres to that policy, but English speculators carried away all the gold long since, and she is now reduced to paper currency, issued by the government, redeemable in silver, and therefore sharing the depreciation and fluctuations which that metal has suffered.

When you hold a dollar not of the bank of Japan or the national bank, which are two very large financial institutions under the auspices of the government, it is worth just as much as a Mexican silver dollar, which is really the standard of value in all Asia. When Japan coined gold it was at par with Mexican dollars in all the empire, but the latter coins were at a discount in the English colonies of Hong-Kong and Bombay. The speculators of the latter cities would, therefore, bring to Japan tons of Mexican dollars and exchange them in small quantities in different cities of the empire for the native gold coin. They did this so secretly and so skillfully that before the public was aware of it Japan had been actually drained of gold and had nothing left upon which to base a bimetallic currency. This trick caused a suspension of gold coinage, and it has not since been resumed.

There is no gold in circulation, or in the public treasury, or in the banks. You can buy gold coins at the curio dealers, and of the exchange brokers, and they make very pretty cuff-bottons and bangles for bracelets, but they have ceased to be money and are only regarded as bric-a-brac. There is very little silver in circulation, but plenty of paper.

The Japanese coinage is based on the decimal system and corresponds with that of the United States. A rin was originally the same as a mill. Ten rin make 1 sen and 100 sen make 1 yen, which used to be as good as a gold American dollar, but is now worth about 51 cents. Therefore, a man who comes here from the United States or Europe with money that is at par with gold finds his funds almost doubled immediately. The salary of the United States minister, which is $12,000 a year, becomes about 24,000 yen, because a yen goes just as far in Japan now, except in the purchase of imported goods, as it did when it was worth a dollar. You can get the same amount of food and fuel, you can employ the same amount of labor, buy the same amount of clothing, and rents have not increased at all. But all foreign merchandise is bought and sold on a gold basis; that is, it has doubled in value. A can of American preserved meats which cost 75 sen a few years ago now cost 1½ yen. An English hat for which you once paid 4 yen now costs 8. An English umbrella for which you paid 5 yen costs 10, and a piano which was worth 500 yen now costs 1,000. The natural result is a decrease in the sales of forign merchandise and an increase in the use of domestic articles.

Speaking as one who does not believe in silver money, nor in bimetallism unless it be universally adopted and all the nations of the earth agree to maintain the value of silver, I must, nevertheless, admit that it is the uniform testimony of all concerned that the demonetization of the white metal by the repeal of the Bland law in the United States and the suspension of coinage in India was a great thing for Japan.

It is a practical question here, and all persons interested, including officials, bankers, merchants, manufacturers and agriculturists—the workingman does not think, so he cannot be included—are anxious that the agitation shall continue indefinitely, lest the present prosperity of the empire terminate. A few theorists, arguing from the standpoint of what ought to be instead of what is, insist that Japan shall join England, the Latin Union and the United States in an international agreement to maintain a certain parity between the metals, but it is by no means a popular idea. They are college professors, minority members of parliament, idle men who think and read a great deal and do nothing, and others who are entirely without practical experience or a knowledge of trade and industry. Most of them have been educated in England and got their financial notions from reading the Times and the Economist.

The solid, wise men, who are governing this empire, say: "No; let the debtors and the creditors in Europe and America fight it out. Meantime we will saw wood. The longer England holds to a single standard the better 'twill be for Japan. We have no foreign debt. We owe nothing abroad. Therefore we do not have to buy gold to pay interest charges. The import trade is nearly all in the hands of foreigners, and we don't care how high foreign manufactured merchandise is. Cotton, iron and flour will stay down in sympathy with silver, and it would be a good thing if nothing but raw materials were imported into Japan."

If the value of gold measured by silver and other commodities continues to rise the manufacturing industries of Great Britain will be compelled to remove to silver-using countries or lose their markets. There has already been a very large exodus of cotton manufacturers from Manchester to India, and I hear of the early transfer of two other large cotton interests from Manchester to Shanghai. The chief markets of Great Britain are silver countries and colonies which will insist upon paying silver prices for what they buy as long as they receive silver wages for their work, or they will make their own goods. Twenty years ago, even ten or five years ago, you could get as much for a silver dollar in England as in China or Japan. Now you can get only half as much. Gold wages have not fallen in England. Silver wages have not increased in China or Japan. The results of silver labor, however, sell for gold prices when they are shipped abroad. Thus the export trade is stimulated in these countries, and having to pay twice as much as formerly for foreign merchandise the people stop buying abroad and supply their wants at home.

For these reasons you will notice that India, Japan, Mexico and other silver countries are not only much more prosperous at present than the gold countries of Europe, but their domestic industries are greatly stimulated. In fact, financial and commercial depression is almost universal except in the countries I have mentioned, where there is nothing but silver money. Prices in England and the United States have fallen with silver, particularly those of exportable products, while in Japan they remain the same. Cotton sells for about one-half what it did five years ago. Silk, which is cultivated with silver wages, brings twice as much. Transportation charges have also fallen. Since silver was demonetized Japan not only gets twice as much for her silk but pays only half as much for her cotton and very much less for freight in taking the one to market and bringing the other here. While cotton fabrics are cheaper it is just as profitable to manufacture them in Japan, because the raw material and freights are correspondingly so. There is no additional cost for food, rent and other necessaries of life. Wheat and flour are selling at less than one-half what they cost in 1875. Rice remains about the same. The price of labor in both hemispheres has remained almost stationary, but from the Japanese standpoint it has doubled in America and England, and from the European standpoint it has been reduced one-half in Japan.

Take the cotton industry as an example. The Japanese mills still pay 18 and 20 sen a day for male labor and 8 and 10 sen for women. In the United States the same labor receives $1.50 for men and 75 cents and $1 for women. But one class is paid in silver, the other in gold. From a Japanese standpoint the Americans pay $3 and $4 for men and $1.50 and $2 for women. From the American standpoint the Japanese pay 9 and 10 cents for men and 4 and 5 cents for women. However one looks at it the difference is very wide, but the fabrics they produce sell for the same prices the world over. Therefore, while the outlay of one had doubled, that of the other has been diminished by one-half.

The American and European manufacturer has to pay the same rent, the same insurance, the same price for fuel, the same interest on borrowed money and the same taxes that he did ten years ago. Therefore the difference between the cost of production now and then must come out of his dividends, and only by the most economical and skillful management can English and American manufacturers survive. On the other hand, the Japanese manufacturer has suffered no increase in fixed charges or in the cost of labor and gets double prices for his products. Where he declared 5 per cent dividends then he declares 10 per cent dividends now. The only disadvantage he suffers is the enhanced cost of new machinery, but the gold value of machinery has fallen with the decline of silver, so that his mill and plant do not represent more two-thirds of the investment that would have been required ten years ago.

The natural and irresistible result of all this is to attract capital into business. Old mills are being enlarged and new ones built. The output increases, competition lowers prices, and the man who is working on a gold basis suffers more and more. This explains why the increase in cotton manufacturing has been so great in Japan. But it applies in an even greater degree to rice, which is another great staple, and in which there is some competition with the southern states of America. Also to silk fabrics, paper and stationery, and many other manufactured products.

The first cotton mill was erected here in 1863 with 5,456 spindles. In 1883 there were sixteen mills with 43,700 spindles. In 1894 forty-six mills with 505,419 spindles. There have been seven new mills with 160,000 spindles already added this year, and several more are nearing completion, which will bring the number of spindles up to 711,000 before Jan. 1, 1896.

The forty mills in the city of Osaka in 1894 paid an average dividend of 16 per cent. The highest was 28 per cent, and the lowest was 8 per cent. The difference was due to management. The yarn mills pay the best.

Great Britian and Germany have suffered more than the United States from the result of silver depreciation, because they have a larger trade abroad and a more limited market at home, and they have not only been the victims of honest competition, but of dishonorable methods. A certain number of people in Japan, like those you find the world over, are fond of foreign goods. It is more a matter of vanity than of taste. The rise in the prices of imported merchandise pinched them, and to meet their demand the local manufacturers took advantage of the situation by imitating standard articles that had been brought from Europe in large quantities. They stole patents, forged trademarks, produced goods of an appearance to deceive the public, and sold them at the old prices. There was much miserable stuff, but many of them were wonderful imitations. This was the severest blow that England and Germany have suffered, for the quality of the bogus articles, as well as the quantity, has improved by experience, and the native manufacturers have got a permanent hold upon a trade that is very valuable.

LITERARY NOTES.

Pierre Loti's new book is entitled "La Galilee."

Mrs. Ward's story of "Bessie Costrell" is to be dramatized.

"Chimmie Fadden," our Bowery friend, is to make his bow on the stage.

M. Henri Rochefort has evolved a novel under the name of "L'Aurore Boreale."

A 1623 folio Shakespeare has been discovered in the University Library at Padua.

The author of "Women's Tragedies" (H. D. Lowry) has written a novel about "A Man of Moods."

Mrs. Amelia E. Barr's new novel is called "Bernicia." It is a story of the period of George II.

Emil Zola will have his romance on Rome completed by February next. It will be his longest work.

The two volumes of Dante Gabriel Rossetti's family letters, edited by his brother, will be brought out in this country by Roberts Brothers.

Mr. Stevenson's "Letters to a Boy"—including his correspondence with his wife's grandson, Austin Strong—are to be published in the entertaining pages of "St. Nicholas."

There is to be a new and uniform edition of Mark Twain's books, and the Harpers are to publish it. The first volume, "Life on the Mississippi," will be brought out before the close of the year.

Mrs. (Mary Anderson) de Navarro has known a great many clever and distinguished persons in Europe, and people are waiting with some curiosity for her forthcoming volume of reminiscences.

Again has Mr. Hardy changed the title of his novel now in course of publication. It was at first "The Simpletons;" it is now "Hearts Insurgent," and it is to become in book form "Jude the Obscure." The volume will contain many passages which have been omitted from the serial.

The "Carnation Series" is the name given by Stone & Kimball to the various volumes of short stories which they are preparing for the autumn. The last announced is "The Sin Eater and Other Stories," by Fiona Macleod. The author is a native of the Hebrides, and her writings have a touch of Northern Ossianic mysticism which is a new note in modern English letters.

Of late almost everything of Stevenson's has been "serialized." Indeed this is almost universally the fate of an important book now-a-days. "Vailima Letters," which is to appear this autumn, is to be treated differently. Its publication by Stone & Kimball in book form will be, aside from a short article, with a few extracts, in one of the magazines, the first opportunity the public will have to see a record of the life in Samoa.

A STATESMAN ABROAD.

Bright Observations of Representative Tarsney Concerning Some Phases of European Travel—Doesn't Take Much Stock in the German Emperor or the English Barber—Paris a Delusion and a Snare.

Representative Tarsney, of Missouri, just after his return from a three months' tour of Europe, chatted pleasantly with a Washington Post reporter. Below are some of the bright things he said: "Three months' running about in Europe is plenty for me. I'm glad to get back. If an American wants to invigorate his patriotism let him go to Europe. When an American's patriotism is falling out and he feels his loyalty becoming prematurely bald give him a dose of Europe. Three months in Europe as a restorative will cause one's love of country to grow like the locks of Sampson.

"The one thing noticeable in France is its hatred of Germany, and the most emphasized trait in the German make-up is its aversion and contempt for everything and everybody French. There's going to be a war over there, not far in the future either. Whatever may become of Russia, Italy and Austria in the fracas, one thing is sure, France and Germany will be against each other.

"The chances now would look like Russia and France against Germany, Austria and Italy, with England flitting about the suburbs of the rumpus searching the pockets of all concerned therein.

"Germany's kaiser is not loved. He suffers from what is colloquially known as a swelled head. He is—in his estimation—an author, a poet, a warrior, the like of whom has not been seen since the bloody days of Attila, 'The Scourge of God.'

"As a poet the kaiser—who, by the way also writes music—is apt to make things go. He wrote a poem recently which I lingered over for hours. Not for its beauty exactly. You see, my German is a little rusty, and there's nothing swift about the aid you gain from Ollendorf. I tackled the kaiser's poem with Ollendorf. It took all one afternoon, but when I got through I thought very well of it.

"Some German students, however, went after it, and said it was not so good as poems which Goethe, Schiller, and several other German gentlemen had written.

"These critical students were being tried for high treason while I was there. The assumption is that they will like the Kaiser's verse better when he lets go of them. In view of their fates I was glad that—with the aid of Ollendorf—I liked the Kaiser's muse.

"The German public, as I said, does not enjoy its Kaiser. He subordinates the civil to the military and keeps the populace more or less in a condition of mimic war. What I mean is this: While I was there, for instance, the kaiser arose one morning and suddenly proclaimed Berlin in a state of siege. Every shop had to shut up; all work came to an end; traffic of all sorts had to clear the streets. It was like stopping the heart of a great city for twenty-four hours. What was the cause? Merely that the Kaiser was in a mood to frolic with the 25,000 troops stationed at Berlin, and the city must be swept clear and free of every scrap of business and litter of trade to afford him a playground.

"Going up the avenue of the Lindens one day my driver suddenly announced over his shoulder: 'Der Kaiser,' in a growling voice like a bear. It was the Kaiser's carriage coming. There were two officers as outriders, a sort of advance guard. The horses were coal black and loaded to the eyes with prance. The driver sat straight up like a ramrod. On each side of him sat an officer of the Kaiser's household, epauletted to the ears; and like the driver, of the ramrod family. The Kaiser and his wife held down the rear seat of the carriage, which was built like one of our victorias. It was noticeable that as he came along not a cheer was raised; not a hand was clapped, not a hat was lifted. All was sober silence, and the street was crowded, too. It gave me a very sinister impression; it would worry me if I were the Kaiser.

"But if you want to see a change in a German or get any demonstration from him better than a shrug, mention the old Kaiser Wilhelm. His eyes will light up like lanterns of admiration. At the name of 'Unzer Fritz' he will weep. But name the present ruler, he will be dumb, sullen, gloomy. It all gave me a bad impression.

"The European barber is the worst I ever saw. In the best hotels in London, where you pay six pence—as much as you would here—a felon with a razor as wide in the blade as a sheet of writing paper and as sharp as the hoe of commerce, will set you up straight, in a stiff, high-backed chair, tuck a back-number towel under your chin, lather you in a supercilious and uncomfortable fashion, and then give you a series of rasps which bring beard, and flesh, and tears, and profanity from you all at once. Then he gives you another back-number towel and gruffly intimates you may wash your face and comb your hair to suit yourself. He's through with you.

"That's all you get out of an English barber. In Paris they are a little better; they treat you as brutally and do as little for you, and do it as vilely as the London barbers. But they as least seem sorry for you in Paris; whereas the British barber exults in a morose, bloody way over the tortures he has inflicted and the ruin he has wrought.

"Paris is a delusion and a snare. Even its vices, which Paris prides itself on and which indeed make up the Parisian stock in trade, are shoddy and deplorably shabby.

"You hear a world-wide exclamation over the giddy dizzinesses of, say, the Moulin Rouge in Paris. American papers will illustrate the doings at the Moulin Rouge. You are given to understand that Bacchus was a sedate citizen in the most profligate days of Rome compared to the gods and goddesses to be met under full heads of steam at the Moulin Rouge.

"Don't you believe it.

"I got Mrs. Tarsney to go to church, and taking a preacher of the gospel to chaperon and protect us, a party of us—all Americans—went out to 'do' the Moulin Rouge.

"It was a dreary affair; as tame as a flock of sheep. The riot and license exists only in the volatile minds of those who write for American papers. There was nothing about it which wasn't shabby, tawdry, weak, futile, and utterly tiresome.

"And the Moulin Rouge is a fair splinter of all Paris. It's a humbug; it assumes to be vicious, whereas it's only vulgar in a weak, pointless way."

Soon the Horse Will Be Out of a Job.

Successful Experiments Which Clearly Foretell an Age of Horseless Vehicles.

From the Boston Transcript.

Locomotives for the road and motor wagons of various kinds are not new in Boston, and the one propelled by electricity that is now attracting much attention on account of the novelty of its construction is not so much of a novelty after all, except as regards the force that propels it. Many years ago there was frequently seen on the streets of Cambridge a buggy designed to carry two persons, with steam for its motor power, that made good time over roads that were not noted for their smoothness. The Metropolitan Street Railroad company once experimented with what were called "dummy engines," and they would probably have come into use had there not been a great outcry raised against them because they frightened horses. But these, of course, were designed for use on iron rails, and are not within the general scope of this article, which deals only with vehicles run on the ordinary roads propelled by motors to take the place of horses. Carriages without horses have long been popular in France. Since 1892 they have been coming rapidly into favor through the invention of a petroleum motor. The recent race from Paris to Bordeaux, in which machines adapted by MM. Panhard and Levassor, of Paris, to carriages of two or four seats competed, has attracted the attention of not only France, but of America. These carriages, made after traditional patterns, are driven by means of a motor which is situated indifferently either at the back or in the front. The driver sits with a lever ready to his hand, by means of which the machinery can be set in motion in a few minutes. Some experimenters have proved that two minutes will suffice for a start, and others agree upon five minutes as the time required. Anyhow, it is a small affair, even if the horses have a sort of advantage here. But horses, at least, cannot go backward, except at great personal inconvenience, and after a vast amount of manipulation by the coachman. The petroleum carriage runs either way without protest. And in the matter of speed no mere horse can approach it. The average speed on good roads recommended by the manufacturers is something more than eleven miles an hour, and even greater claims are made for it. The petroleum in these engines is used as a fuel for the production of steam. They are as easily worked as a tricycle, probably easier. A novice, as many witness, is able, upon the first trial, to drive his carriage over two hundred miles in two days of ten hours apiece. Tourists have wandered over half a dozen departments in them, and the taste is spreading every day.

These vehicles, perfect as they appear to be, will have to give place to the later devices of electricians. So far those that have been constructed have proved too heavy and expensive to find general sale. The batteries alone cost about $500. They have undoubted advantages. The are clean, noiseless and require no engineer or skilled operator, resembling in this respect the trolley and the cable car. But the excessive load of the batteries and the lack of facilities for recharging them will prohibit their use outside of large cities for some time to come. Supplies of petroleum and gasoline are to be obtained in any town. The petroleum vehicles are light, more convenient in running, and also require no engineer. For these reasons they must take the precedence for ordinary use until the ingenuity of the Yankee has overcome the obstacles that electricity presents. Take, for instance, the electric wagon of the Boston inventor. It is heroic in its proportions, resembling an English brake in general design, and is built to outlast the "wonderful one-hoss shay." It weighs 5,100 pounds and is undoubtedly the heaviest motor wagon on the continent, rivaling in weight the steam omnibuses of Paris. The general design of the vehicle is well adapted to the purpose. The batteries contained in the body and under the front seat are extremely powerful, consisting of forty-four chloride cells, with a total capacity of two hundred ampere hours, and an average discharge rate of twenty-five ampheres. The motor yields four horse-power and three different speeds are obtained, the minimum being four and the maximum fourteen miles an hour. The owner has put this carriage through the paces in hill climbing and over heavy roads with most satisfactory results.

An electrical wagon in use in Philadelphia has run several hundred miles without an accident. As compared with patroleum vehicles it is rather ponderous, weighing 4,250 pounds. The batteries weigh 1,600 pounds and consist of sixty chloride accumulaters, having a maximum capacity of thirteen horse power. From 50 to 100 miles can be accomplished on one charge, according to the grade and speed, and the maximum speed attainable is fifteen miles an hour. The motor, weighing 300 pounds, is a nominal three-horse power, electric launch type, capable of developing for a short time nine full horse power. Steering is accomplished by means of a wheel in front of the driver.

The first electric wagon ever seen near New York has just appeared in Brooklyn. It came from the West, and is the invention of two residents of Kansas City. It weighs about 3,000 pounds, and as at present constructed has but one seat. Eighteen hundred pounds of storage batteries of the chloride accumulater type furnish the power, which is communicated to the wheels by a rawhide friction pulley running on a steel flange attached to the inside of the rear wheels. When desired, an automatic lever detaches the power from the driving wheel without stopping the motion of the motor. On ordinary good roads a speed of fifteen or eighteen miles an hour can be obtained, and for ascending hills a reserve of twelve horse power can be drawn upon. A run of fifty miles can be made with one charge of the batteries.

Lock Haven, Pa., is also a claimant for honors in this direction. This wagon is intended for hotel service. The seats run lengthwise, and under them are stored the batteries, eight cells in all, four on each side. Though so few in number, these cells are said by the inventor to have sufficient capacity to run the wagon fifteen days of nineteen hours each, recharging themselves from a generator often sixteen candle power lights. The motor develops three horse-power, geared to equal six. The vehicle weighs 1,600 pounds, and is said to carry 3,000 pounds. The rubber tires, with which it is fitted, increase the comforts of riding.

When the wagon stops or is running down hill the generator returns the used up current to the batteries, thus economizing power. It is claimed that on a good road a speed of twenty-five mile an hour can be reached, and the project is on foot to apply the invention to fire and police patrol wagons, hotel omnibuses and pleasure wagons.

A light and graceful buggy propelled by a gasoline motor has for three months past been traversing the streets of Springfield and adjacent country. This vehicle weighs only 600 pounds, much less than any so far constructed abroad. The motor, which has a capacity of four horse-power, is on the explosion principle, but the gas is not manufactured in a carburetter before entering the explosion chamber, as is true in nearly all other petroleum motors. Thus a saving in weight and a gain in simplicity are secured, which are important considerations in a motor vehicle. The motor weighs but 120 pounds, and has betrayed no weakness after a record of 1,500 miles over varying conditions of rode and grade. Speeds varying from three to ten miles an hour can be obtained without changing the speed of the motor, and if a higher speed is desired, pressure of a button quickens the action of the motor. The vehicle can be stopped within a space of four feet. The cost of running is one-fourth of a cent a mile.

Two radically new motors have recently been developed in this country. They are the ether motor and the hot-air engine. The ether motor is the fruit of the genius of a young inventor of Portland, Me. For the generation of power he employs ether instead of water, ether being converted into expanding gas at ninety-six degrees, whereas water requires 212 degrees to convert it into steam. A great saving of heat is thus effected, and the gas of ether is a third more powerful than steam. The inventor constructed a bicycle fitted with his motor and it is claimed that a speed of sixty miles an hour is possible. The entire bicycle, with pneumatic tires three inches in diameter, weighs only sixty pounds.

The hot-air engine, which is now being manufactured by a Western firm for the propulsion of bicycles, vehicles and launches, is a machine of wonderful simplicity and lightness, a four-horse power engine weighing less than fifty pounds, balance wheel included. The engine runs at 500 revolutions a minute. The fuel employed is ordinary kerosene oil or gasoline which is stored in a tank or reservoir and is supplied to the engine through a small pipe by gravitation. The amount consumed is one-tenth gallon per hour for each horse power. The kerosene or gasoline is fed into the cylinder and exploded by an electric spark from the battery, causing a heating and expansion of the air within the cylinder. There are either one, two or four cylinders according to the amount of power to be developed. The speed is regulated by increasing or diminishing the flow of oil, and the engine is stopped by throwing off the switch from the battery. These engines are applied to bicycles, tandems, tricycles and to comfortable little victorias, which are built low, have four-inch pneumatic tires, seat two persons and carry a four-horse-power engine.

FOOT BALL RULES.

Changes Suggested by Yale and Princeton to Be Repudiated by Harvard and Pennsylvania—Different Sets Will Make Confusion.

There is going to be a nice little imbroglio in the matter of foot ball rules this fall, says the Chicago Record. The American Intercollegiate Foot Ball association seems to have met its death when Pennsylvania and Wesleyan withdrew, and it seemed a mockery for Yale and Princeton to continue the existence of the body. It now appears, however, that there is considerable rhyme and a good deal of reason in the action of these exclusive colleges. The association yearly publishes the rule book, and heretofore every college, school and athletic club in the country has played the game under the rule book of the association. It has been wondered whether Yale and Princeton would this year endeavor to prescribe rules for all foot ball in America. Such now appears to be their intention. "Aleck" Moffat, Walter Camp and other solons from the New Haven and New Jersey institutions have had their heads pretty close together recently, and have decided upon at least three prominent changes in the rules. Harvard, Pennsylvania and Cornell have tacitly agreed to a couple of changes in the rules, but these only to apply to games between these colleges.

Is Bound to Make Confusion.

Here is a conflict at the very start. Cornell and Princeton have a match arranged. Under what rules will that match be played? When Pennsylvania plays Lafayette Harvard meets Amherst, Princeton Lehigh and Yale has a game with the Crescents. What rules will govern? It is bound to end in confusion and endless bickerings. Some colleges will accept the new Yale-Princeton rule book, and others will adhere to the carefully prepared rules of '94—rules that were made after the most careful deliberation by Yale, Princeton, Harvard, Pennsylvania and Paul Dashiell, who represented the experienced umpires and referees in the country.

The three changes proposed by Princeton are these: First, that on a fair catch the man making the same shall have the privilege of choosing between a "free kick" and a down. This is an immaterial change from last year's rules and the present Harvard-Pennsylvania-Cornell agreement. Second, that, as last year, there shall be three officials—referee, umpire and linesman—any one of whom shall have the power of disqualifying a player for fouls. This, too, is an immaterial change. Third, and this is where the rub comes in. Princeton and Yale propose that every rusher shall remain in his place in the line until after the ball has been put in play. This is radical, even unknown to old times, and opposed to every principle of American college Rugby. It does away entirely with the many pretty and strategic pieces of flying interference round the end plays and general assistance for the backs, rudiments of the great and intelligent game played by Pennsylvania, Harvard and Cornell and copied by such strong teams as those of Brown, Amherst, Dartmouth, Williams, Lehigh, Lafayette, Virginia, Michigan, State, Crescents, Chicago and others without limit.

The question now is will these teams consent to the dictation of Yale and Princeton, willingly see their own teams weakened and the game in general deprived of much of its merits?

MUNYON'S HOMOEOPATHIC REMEDIES

MUNYON'S Rheumatism Cure never fails to relieve in three hours and cure in three days.

MUNYON'S Dyspepsia Cure is guaranteed to correct constipation and cure all forms of indigestion and stomach trouble.

MUNYON'S Catarrh Cure soothes and heals the afflicted parts and restores them to health. No failure; a cure guaranteed.

MUNYON'S Kidney Cure speedily cures pains in the back, loins or groins and all forms of kidney disease.

MUNYON'S Nerve Cure cures nervousness and builds up the system.

MUNYON'S Vitalizer imparts new life, restores lost powers to weak and debilitated men. Price $1.00.

No matter what the disease is or how many doctors have failed to cure you, ask your druggist for a 25-cent vial of one of Munyon's Cures, and if you are not benefited your money will be refunded.

RAILROAD TIME-TABLES

Central Railroad of New Jersey.

(Lehigh and Susquehanna Division)

Anthracite coal used exclusively, insuring cleanliness and comfort.

TIME TABLE IN EFFECT JUNE 2, 1895.

Trains leave Scranton for Pittston, Wilkes-Barre, etc., at 8.20, 9.15, 11.30 a.m., 1.23, 2.00, 3.05, 5.00, 7.10 p. m. Sundays, 9.00 a. m., 1.00, 2.15, 7.10 p. m.

For Atlantic City, 8.20 a.m.

For New York, Newark and Elizabeth, 8.20 (express) a. m., 1.23 (express with Buffet parlor car), 3.05 (express) p.m. Sunday, 2.15 p. m. Train leaving 1.23 p. m. arrives at Philadelphia, Reading Terminal, 6.21 p. m. and New York 6.45 p. m.

For Mauch Chunk, Allentown, Bethlehem, Easton and Philadelphia, 8.20 a.m., 1.23, 3.05, 5.00 (except Philadelphia) p. m. Sunday, 2.15 p.m.

For Long Branch, Ocean Grove, etc., at 8.20 a. m., 1.23 p. m.

For Reading, Lebanon and Harrisburg, via Allentown, 8.20 a. m., 1.23, 5.00 p. m. Sunday, 2.15 p.m.

For Pottsville, 8.20 a. m., 1.23 p. m.

Returning, leave New York, foot of Liberty street, North river, at 9.10 (express) a.m., 1.10, 1.30, 4.30 (express with Buffet parlor car) p.m. Sunday, 4.30 a.m.

Leave Philadelphia, Reading Terminal, 9.00 a.m., 2.00 and 4.30 p.m. Sunday 6.27 a.m.

Through tickets to all points at lowest rates may be had on application in advance to the ticket agent at the station.

H. P. BALDWIN, Gen. Pass. Agent.

J. H. OLHAUSEN, Gen. Supt.

Del., Lack. and Western.

Effect Monday, June 24, 1895.

Trains leave Scranton as follows: Express for New York and all points East, 1.40, 2.50, 5.15, 8.00 and 9.55 a.m.; 12.55 and 3.34 p.m.

Express for Easton, Trenton, Philadelphia and the south, 5.15, 8.00 and 9.55 a.m., 12.55 and 3.34 p.m.

Washington and way stations, 3.55 p.m.

Tobyhanna accommodation, 6.10 p.m.

Express for Binghamton, Oswego, Elmira, Corning, Bath, Dansville, Mount Morris and Buffalo, 12.10, 2.35 a.m., and 1.21 p.m., making close connections at Buffalo to all points in the West, Northwest and Southwest.

Bath accommodation, 9 a.m.

Binghamton and way stations, 12.37 p.m.

Nicholson accommodation, at 4 p. m. and 6.10 p. m.

Binghamton and Elmira Express, 6.05 p.m.

Express for Cortland, Syracuse, Oswego Utica and Richfield Springs, 2.35 a.m. and 1.21 p.m.

Ithaca, 2.35 and Bath 9 a.m. and 1.21 p.m.

For Northumberland, Pittston, Wilkes-Barre, Plymouth, Bloomsburg and Danville, making close connections at Northumberland for Williamsport, Harrisburg, Baltimore, Washington and the South.

Northumberland and intermediate stations, 6.00, 9.55 a.m. and 1.30 and 6.07 p.m.

Nanticoke and intermediate stations, 8.08 and 11.20 a.m. Plymouth and intermediate stations, 3.40 and 8.52 p.m.

Pullman parlor and sleeping coaches on all express trains.

For detailed information, pocket time tables, etc., apply to M. L. Smith, city ticket office, 328 Lackawanna avenue, or depot ticket office.

DELAWARE AND HUDSON RAILROAD.

"The D&H"

Commencing Monday, day, July 30, all trains will arrive at new Lackawanna avenue station as follows:

Trains will leave Scranton station for Carbondale and intermediate points at 2.20, 5.45, 7.00, 8.25 and 10.10 a.m., 12.00, 2.20, 3.55, 5.15, 6.15, 7.25, 9.10 and 11.20 p.m.

For Farview, Waymart and Honesdale at 7.00, 8.25 and 10.10 a.m., 12.00, 2.20 and 5.15 p.m.

For Albany, Saratoga, the Adirondacks and Montreal at 5.45 a.m. and 2.20 p.m.

For Wilkes-Barre and intermediate points at 7.45, 8.45, 9.38 and 10.45 a.m., 12.05, 1.20, 2.38, 4.00, 5.10, 6.05, 9.15 and 11.38 p.m.

Trains will arrive at Scranton station from Carbondale and intermediate points at 7.40, 8.40, 9.34 and 10.40 a.m., 12.00, 1.17, 2.34, 3.40, 4.54, 5.55, 7.45, 9.11 and 11.33 p.m.

From Honesdale, Waymart and Farview at 9.34 a.m., 12.00, 1.17, 3.40, 5.55 and 7.45 p.m.

From Montreal, Saratoga, Albany, etc., at 4.54 and 11.33 p.m.

From Wilkes-Barre and intermediate points at 2.15, 8.04, 10.05 and 11.55 a.m., 1.16, 2.14, 3.39, 5.10, 6.08, 7.20, 9.03 and 11.16 p.m.

Erie and Wyoming Valley.

Trains leave Scranton for New York and intermediate points on the Erie railroad at 7.00 a. m. and 3.24 p. m. Also for Honesdale, Hawley and local points at 7.00, 9.40 a. m. and 3.24 p. m.

All the above are through trains to and from Honesdale.

Train for Lake Ariel 5.10 p. m.

Trains leave for Wilkes-Barre at 6.39 a. m. and 3.45 p. m.

LEHIGH VALLEY RAILROAD.

May 12, 1895.

Train leaves Scranton for Philadelphia and New York via D. & H. R. R. at 7.45 a. m., 12.05, 1.20, 2.38 and 11.38 p. m., via D., L. & W. R. R., 6.00, 8.08, 11.20 a. m., and 1.30 p. m.

Leave Scranton for Pittston and Wilkes-Barre, via D., L. & W. R. R., 6.00, 8.08, 11.20 a. m., 3.50, 6.07, 8.52 p. m.

Leave Scranton for White Haven, Hazleton, Pottsville and all points on the Beaver Meadow and Pottsville branches, via E. & W. V. R. R., 6.40 a.m., via D. & H. R. R. at 7.45 a. m., 12.05, 1.20, 2.38, 4.00 p. m., via D., L. & W. R. R. 6.00, 8.08, 11.20 a. m., 1.30, 3.50 p. m.

Leave Scranton for Bethlehem, Easton, Reading, Harrisburg and all intermediate points via D. & H. R. R., 7.45 a.m., 12.05, 1.20, 2.38, 4.00, 11.38 p. m., via D., L. & W. R. R., 6.00, 8.08, 11.20 a. m., 1.30 p. m.

Leave Scranton for Tunkhannock, Towanda, Elmira, Ithaca, Geneva and all intermediate points via D. & H. R. R., 8.45 a.m., 12.05 and 11.35 p.m., via D., L. & W. R. R., 8.08, 9.55 a.m., 1.30 p.m.

Leave Scranton for Rochester, Buffalo, Niagara Falls, Detroit, Chicago and all points west via D. & H. R. R., 8.45 a.m., 12.05, 9.15, 11.38 p.m., via D., L. & W. R. R. and Pittston Junction, 8.08, 9.55 a.m., 1.30, 8.50 p.m., via E. & W. V. R. R., 3.41 p.m.

For Elmira and the west via Salamanca, via D. & H. R. R., 8.45 a.m., 12.05, 6.05 p.m., via D., L. & W. R. R., 8.08, 9.55 a.m., 1.30, and 6.07 p.m.

Pullman parlor and sleeping or L. V. chair cars on all trains between L. & B. Junction or Wilkes-Barre and New York, Philadelphia, Buffalo, and Suspension Bridge.

ROLLIN H. WILBUR, Gen. Supt.

CHAS. S. LEE, Gen. Pass. Agt., Phila., Pa.

A. W. NONNEMACHER, Asst. Gen. Pass. Agt., South Bethlehem, Pa.

NEW YORK, ONTARIO AND WESTERN RAILWAY.

SCRANTON DIVISION.

In Effect, May 19th, 1895.

North Bound.				South Bound.		
205 Local Pass	203 N Y Day Exp	201 Local Pass	Stations (Trains Daily, Except Sunday.)	202 Local Pass	204 Ont'o Day Ex	206 Local Pass
P M	P M		Arrive Leave			A M
10 55	7 25	....	N. Y. Franklin St.	....	....	7 40
10 40	7 10	....	West 42nd street	....	....	7 55
10 30	7 00	....	Weehawken	....	....	8 10
P M	P M		Arrive Leave	A M		P M
5 25	1 15	....	Hancock Junction	6 00	....	2 05
5 20	1 09	....	Hancock	6 06	....	2 11
5 10	12 56	....	Starlight	6 18	....	2 22
5 04	12 46	....	Preston Park	6 25	....	2 31
4 55	12 40	....	Como	6 32	....	2 41
4 52	12 25	....	Poyntelle	6 42	....	2 50
4 47	12 17	....	Belmont	6 45	....	2 56
4 35	12 03	....	Pleasant Mt.	6 55	....	3 06
4 31	f11 54	....	Uniondale	f6 58	....	3 09
4 21	11 40	9 28	Forest City	7 10	P M	3 19
4 06	11 34	9 15	Carbondale	7 24	12 34	3 34
f3 58	f11 30	9 12	White Bridge	7 27	f12 37	f3 38
f3 55	....	f9 07	Mayfield	f7 32	f12 42	f3 43
3 53	11 23	9 05	Jermyn	7 34	12 45	3 45
3 51	11 18	8 57	Archibald	7 40	12 51	3 51
3 49	11 15	8 54	Winton	7 42	12 54	3 54
3 45	11 11	8 50	Peckville	7 48	12 58	3 59
3 38	11 07	8 44	Olyphant	7 52	1 04	4 04
3 35	11 03	8 41	Dickson	7 54	1 07	4 07
3 34	11 01	8 39	Throop	7 56	1 10	4 10
3 30	10 57	8 35	Providence	8 00	1 14	4 14
f3 27	f10 57	8 32	Park Place	8 02	f1 16	f4 17
3 25	10 55	8 30	Scranton	8 05	1 20	4 20
P M	A M	A M	Leave Arrive	A M	P M	P M

All trains run daily except Sunday.

f. signifies that trains stop on signal for passengers.

Secure rates via Ontario & Western before purchasing tickets and save money. Day and Night Express to the West.

J. C. Anderson, Gen. Pass. Agt.

T. Flitcroft, Div. Pass. Agt., Scranton, Pa.