

OLDEST BEACON ON COAST

Boston Light Was First One Built on American Coast.

ESTABLISHED IN YEAR 1715

For Nearly Two Centuries Its Rays Have Guided Shipping to and From Port — Was Burned and Struck by Lightning — Blown Up by the British.

The lighthouse at the entrance of Boston harbor was the first one erected on the American coast.

For nearly a century after the first settlement of these shores by the English, and New York by the Dutch, the ships that came to America were obliged at night to approach the coast with the utmost caution because there were no lighthouses to guide them in to port.

Boston light, the first lighthouse established on the American coast, was begun in 1715, and finished the next year. It stood on Little Brewster island, where the present Boston light also stands. Its cost was about \$11,500, and the bill was paid by the province of Massachusetts bay.

The first keeper of Boston light, with his wife and daughter, was drowned two years after he took office, and Ben Franklin, 12 years of age, hawked through the streets a ballad on the catastrophe, printed by his brother, which in Franklin's own words, "sold prodigiously, though it was wretched stuff."

The lighthouse was partly burned in 1751, probably from an exploding lamp, and it was also at different times struck by lightning.

The lighthouse became an object of concern to both sides in the war of independence. In the summer of 1775, while the British fleet was in the harbor, a party of Americans from Milton, under Maj. Benjamin Tupper, went to the light, and set fire to the tower. The fire destroyed the wood-work of the lantern, and the glass.

Admiral Samuel Graves in command of the fleet, sent a guard of 50 marines to the lighthouse. In September, 1775 the guard was attacked by a force of 300 men under Maj. Tupper, which killed 12 men and took the others of the guard prisoners, besides "several artisans" at work on the lighthouse, and fired all the buildings on the island and demolished the upper part of the tower.

By the time this was done the tide had fallen, and the Americans could not get away in their boats. The British observed their plight and sent a party to attack them. One of the British boats was sunk and several of the crew were lost. Maj. Tupper got away with the loss of one man killed and three wounded. The British loss was 53 men killed or taken prisoners by the Americans. Washington thanked Maj. Tupper and his men in general orders for their gallant service at the light.

When the British evacuated Boston they did not leave the bay at once, but lingered to do as much damage as possible on the islands in the harbor. When finally they left the ports they sent boats to the lighthouse from the warship *Renown*, which took off a party of regulars then stationed there, and blew up the tower. This was the last hostile act of the British before leaving for Halifax.

The cost of maintaining the light was defrayed by a tax known as lighthouse dues, imposed on all shipping, except coastwise, entering or leaving the port of Boston. In 1789 this tax was one shilling a ton on foreign vessels, and 2½ pence on domestic shipping.

Boston light could properly be called "the" lighthouse for 44 years, or until a light was built at Sandy Hook. Other ports saw the value of a fixed and reliable guide to shipping, but progress was slow at first, in building lighthouses on a coast so long as that of the colonies, and as late as Aug. 7, 1789, when the United States took over the title to the lighthouse in the various seaboard states, there were but eight lights on the Atlantic coast, and none on the gulf.—*Boston Globe*.

Automobile Beginnings.

How many persons remember that from 1834 to 1840 George Hancock's steam coaches ran at a profit between Paddington and the City? Is it realized generally that Gottlieb Daimler, the true father of the petrol engine, had worked in England as well as in Germany before he patented, in 1884 only, the Otto gas engine and fitted it in 1886 to his bicycle, which may be regarded as the first motor car driven by an explosion engine? From this date progress abroad was of remarkable rapidity, while in England none was possible until in 1895 Mr. Evelyn Ellis imported a four horse power Panhard and Sir David Salomons a Peugeot.

There followed a modest demonstration at Tunbridge Wells of these two vehicles, a De Dion steam car and a petrol bicycle, and then, after some agitation, the Light Locomotives Act of 1896. In fact, from a modern point of view, Gottlieb Daimler is the parent of the infant motor car and Mr. Henry Chaplain is its sponsor in England.

An interesting example of the many different practical uses which are likely to be found for the X-rays is provided by the Ceylon pearl fisheries. By the application of the rays it is now said to be possible to tell whether an oyster contains a pearl or not, and those which are in a purely normal and healthy state are thrown unopened back into the sea. By the adoption of this device, the depletion of the oyster bed is, of course, reduced very greatly.

EUROPE OUR MARKET.

The Wonderful Absorptive Power of Old Woid for American Products.

In an article in World's Work on "What Europe Means to Us," J. D. Whelpley presents facts of tremendous meaning to the United States. He says:

Always buying more than it sells, eating more than comes from its soil, lending more than it borrows, and in every way apparently giving more than it takes, Europe's constantly increasing population, wealth and power form a mystery, for they are the most wonderful and fascinating of all economic phenomena.

The United States has a population of twenty-two to the square mile. In the past one hundred years, Europe has sent 40,000,000 people to the United States and other new countries, and yet today has a population of 103 to the square mile, or nearly twice as many as when this emigration began. In the meantime, wages have increased, wealth has piled up, trade has quadrupled, and the purchasing power of the people of Europe has more than kept pace with all these advances.

Even to estimate the animal domestic exchanges of Europe is beyond the reach of intelligible figures. The foreign exchange is a quantity which can be determined with more or less accuracy, however, and its amount—\$14,000,000,000 annually—conveys an idea of the tide of commerce that flows through this heart of the world.

The imports of these eighteen countries amount to \$8,000,000,000, the exports to \$6,000,000,000, showing an excess of purchases over sales amounting to \$2,000,000,000. The imports from abroad, meaning from countries other than European, and these are largely of food and raw materials.

About 65 per cent of the total exports from the United States are of agricultural products, though much of this might be regarded as manufactured goods because many agricultural products are put through manufacturing processes. Roughly speaking, the American people sell \$900,000,000 worth of such products a year to foreign buyers. Nearly 90 per cent goes to Europe, hence about four-fifths of the American goods sent to Europe supply food and raw material.

American products feed the operatives in the European mills and factories who are making goods for all the world. They provision the foreign ships which carry the world's commerce, and keep down the cost of living in Europe by supplementing the comparatively scanty supply of home-grown foods. These agricultural products of America are now so necessary to Europeans that they are admitted without serious restrictions to nearly all European markets.

"Doubles" of Public Men.

Nearly every well known personage has a double who, by careful dressing, does his best to keep up the flattering illusion. King Edward has several, but the one with the strongest resemblance lives in the East End.

The kaiser's double is a tailor, King Oscar of Sweden's an inhabitant of Lyons, the part of the county, by the way, from which the king's grandfather originally came; and King Leopold of Belgium's is a pickpocket, who takes advantage of the likeness to practice his rascality upon smart crowds on public occasions.

Leaving the crowned heads, President Loubet, it was shown the other day, has a double in Paris, while President Roosevelt's likeness is a comic singer. M. Combes, the French premier, is the exact likeness of an old general of the empire, while M. Peltan, the French minister of marine, is doubled by a bookmaker and a cab driver.—*The Sketch*.

Sweetening Sugar.

All sugar is not sweet, or rather sweet enough to come up to the required standard of sweetness, so some kinds must be sweetened artificially. There are many establishments where this process is carried on. A cone of sugar is placed over an apparatus apex downward, many little holes in the apparatus coming in contact with the point of the cone. A thick liquid is poured on the flat end of the cone and the machinery is set in motion. The holes become the mouths of the suction tubes and the sweetening liquid is drawn through the cone, giving it the necessary quality.

Acquisition From Japan.

Another beautiful foliage plant, an acquisition from Japan, is the *Aspidistra*, not often met with, though for decoration it surpasses flowers more widely known. I have seen a large specimen plant of it at the residence of a lady on Edwards street. It is low-growing, the broad leaves having the tendency to bend over when the pot becomes quite full of them. When too large it is good to divide the roots. It is generally thought not to flower, but it does, like the wild ginger, have its blossoms concealed low near the ground. They are of a purplish color.—*Hartford Times*.

Vaccination Without a Scar.

As a result of experiments made in some of the hospitals in Paris, it is stated that vaccination performed under a red light leaves no scar and causes less pain. The patient is vaccinated in a room where the only light is an incandescent lamp with a red globe.

Makes Bird of An Airship.

J. R. Dalmida of St. Catherine's, Ont., has invented an airship. It is constructed of bamboo, resembles a bird in shape, and has two wings, each 84 feet long. It is worked by levers moved by the operator's feet.—*New York World*.

THE OLD STAGE DRIVER

Making His Last Stand in the Far West.

RAILROADS PUSHING HIM

Wherever He Is Found He Is Still An Important Person—Excitement of His Arrival—Little Niceties of His Profession Set Forth in a Graphic Manner.

It is only in isolated regions of the West, where the thing we call civilization has by chance neglected its duties, as the plowman leaves weedy patches in the corners of the field, that the cowboy may still be found unspooled; and it is even a rarer fortune to encounter a stage driver whom readers of Bert Harde can recognize. What the homesteader and the sheepman have done to the one, the railroad has done to the other; and the sadness of hastening extinction hangs over them both.

Here is Estes Park—happy, unroaded land!—the coming of the stage is a daily happening, in which every inhabitant takes an interest so keenly personal that the event itself, as well as the interest, becomes spectacular.

Toward 4:30 o'clock anxiety sits gaunt upon every countenance. Will the stage be late? Somebody who drove over Park Hill in the morning said the roads were heavy. A freighter from Lyons was stuck for three hours on the other side of the pass. The outlook grows gloomier every minute, and all eyes are strained with gazing at the dusty road toward the place where it disappears behind the shoulder of a hill. It needs no over fanciful inclination to conceive, after listening to impatient exclamations on all sides, that the continued tolerability of many lives, as well as the further existence of Estes Park as a habitable place, depends upon the arrival of that stage, with its pouches of mail. No one may know the golden increments of expectancy who has not waited for a letter by stage.

A boy (of course) perched precariously on the roof of the store first describes the stage whirling in its nimbus of dust around the promontory. Upon his shout the groups suddenly rearrange themselves and the relaxation of facial muscles presages new faith in the ultimate worth of human existence. Meanwhile the stage, in a kind of final fury of speed, careers grandly up the stretch of road, sweeps through the open space ordered by the postmaster, makes an elated swing for position, and stops at the postoffice door with the wheels within an inch of the steps, but never grazing them. To have scraped them would have been a humiliation from which the driver never could have recovered.

The mail and the passengers out, the driver takes his tired team to the stable, and then loses no time returning afoot to the postoffice, where, having accepted one of many proffered cigars, he deigns to make Spartan-like replies to the volumes of questions and tentative remarks timidly addressed to him. He is a good fellow at heart, tolerant of the common world, and willing at times to entertain with speech as well as deeds.

But today is not his day for loquacity. Down at Lyons, where the Burlington ends he heard a bit of news—that one of the proposed branch lines of the railroad now building will probably have Estes Park for its terminus and his heart is filled with sadness. By and by the crowd, seeing his mood, leave him to his reflections, and the departing people, hurrying away by the four roads they came, leaving him leaning against a post, with the postmaster's woolly dog squatting at his feet and looking sympathetically up in his face.

The stage driver has let his cigar go out, and his eyes are fixed upon the west, where behind the snowy range the sun is tumbling into his world bed of rosewood inlaid with pearl and draped with cloud curtains of frail pink and tender yellow hues. But it is not the sunset he sees. Behind Old Flat Top yonder, thirty miles away, are the grading camps of the new railroad that is climbing the Rockies on its way to the Pacific coast. And if he is not thinking of them, the interlopers, it's quite too bad, and I am done with him.—*Ed-ward A. Bingham, Estes Park, Col.*

Selling One's Wares.

In parts of Switzerland the baker's wife carries round the bread in a sort of hamper, and she has not a fixed, immutable charge, but chaffers for a price with the customers. The old English word for this process was "cheaping," which in many places in England has been corrupted into chipping. Chipping Norton, for instance, is really Cheaping Norton, or the place where goods were cheapened—that is, sold by chaffer.

"Front Room" Crusade.

An English educational society which declares that people ought to live in and use their "front rooms" has created a sensation. The London Express remarks: "Such a reckless suggestion is calculated to undermine the very foundations of lower middle-class home life in this country," the front room being sacred to "company" over there.

Old Maids' Paradise.

The disproportion of the sexes is still very great in some parts of Australia. In West Australia, for example, there are only 64,000 women in a population of 168,000.

A fellow will often run into debt and then try to crawl out.

CAN ANIMALS THINK?

John Burroughs Contends That They Have No Such Power.

Animals have keen perceptions—keen in many respects than our own—but they form no conceptions, have no powers of comparing one thing with another. They live entirely in and through their senses. To all that inner world of reflection, imagination, comparison, reason, they are strangers. They never return upon themselves in thought. They have sense memory, sense intelligence, and they profit in many ways by experience, but they have no soul memory, or rational intelligence. All the fundamental emotions and appetites men and the lower animals share in common, such as fear, anger, love, hunger, jealousy, cunning, pride, curiosity, play; but the world of thought and thought experience, and the emotions that go with it, belongs to man alone.

It is as if the psychic world were divided into two planes, one above the other—the plane of sense and the plane of spirit. In the plane of sense live the lower animals, only now and then just breaking for a moment into the higher plane, says John Burroughs in Harper's Magazine. In the world of sense man is immersed also; but he rises into the plane of spirit, and here lives his proper life. He is emancipated from sense in a way that beasts are not.

Peru Has High Railway.

One of the most interesting trips afforded by the present transportation facilities of Peru is that over the Oro-yo railroad, which now runs from Callao to the gold fields of Cerro de Pasco. It is considered one of the wonders of the Peruvian world, and the original contract was taken by Mr. Meigs at \$27,600,000 in bonds at 79. It is certainly the greatest feat of railroad engineering in either hemisphere and as a specimen of American enterprise and workmanship it suffers nothing by comparison. It was begun in 1870 and finished in 1876, and additional work has since been done on it. Commencing in Callao, it ascends the narrow valley of the Rimac, rising nearly 5,000 feet in the first forty-six miles.

Thence it goes through the intricate gorges of the Sierras till it tunnels the Andes at an altitude of 15,645 feet, the highest point in the world where a piston rod is moved by steam. The wonder is doubled on remembering that the elevation is reached in seventy-eight miles. One of the most remarkable things in connection with this road is that between the coast and summit there is not an inch of down grade. The difficulties encountered in its construction were extreme—landslides, falling boulders, sordide (or the difficulty of breathing in high altitudes) and verrugas, a disease known only along the line of this road, characterized by a species of warts breaking out all over the body and bleeding. About 8,000 workmen were engaged at one time, and between 7,000 and 8,000 persons died or were killed in the construction of the road.—*Engineering Magazine*.

Beware of These Flowers.

It is claimed that the tulip is a dangerous flower. Take a tulip of a deep crimson color and inhale it with profound inspirations and it will be apt to make you lightheaded. You will say and do queer things—dance, sing, fight, swear and so on. For two hours you will cut up in this way. Afterward you will be depressed.

The poppy is another flower supposed to be dangerous. A young woman of a nervous temperament, if she lingers among a bed of poppies, will grow drowsy, the same as if she had smoked a pipe or two of opium.

In Asia Minor, where the opium manufacturers cultivate vast fields of poppies, tourists inspecting the beautiful flowers often become altogether incapacitated. They get so sleepy they can hardly talk. They reel in their gait. In some cases they have to be put to bed.—*Kansas City Journal*.

Straw in Egyptian Brick.

The ancient Egyptians had a process for making bricks which rendered them very hard yet easy to work. An American engineer, Mr. Acheson, thinks he has discovered their secret, says the London Globe. The Egyptians used straw, and by boiling straw in water and mixing clay with it he found that it gave hard, shapely bricks that did not crack nor deform in baking. Analysis proved the effect due to tannin dissolved in water. Further experiments showed that from 1/2 to 1 per cent of the tannin of commerce added to the resistance of the brick. The process also economizes water, and such bricks dried in the sun are even more solid than those of the kiln.

Millions and the Mikado.

The emperor's yearly expense of living is limited. For this purpose he draws \$3,000,000 from the national treasury, writes Hoamer Whitfield in Success. He has got to pay out of it some 1,000 employes. The lady-in-waiting is said to be paid \$150 monthly. I have no doubt that even a washing-girl is paid about \$70. Japan is a country where a laboring man's wages are not more than 50 cents daily. The chief cook of the imperial palace is paid \$200 a month.

The Golden Mean.

The motto of the Greeks was "Nothing too much." An excess of courage is brutality. An excess of economy is penuriousness.

An excess of taste is preciosity. An excess of gentleness is timidity. An excess of confidence is egotism. Who will show us where to draw the line?—*Everybody's Magazine*.

HOTEL HOUSECLEANING

Giant Task Accomplished in the American Caravansary.

EXPENSIVE UNDERTAKING

Much Silver, China and Linen, Owing to Breakage or Theft, Must Be Replaced — Carpets Renewed. Army of Cleaners Required. Costs Nearly \$50,000.

Fifty thousand dollars in cold cash and three months of incessant work by a thousand people are required to accomplish the greatest house cleaning in the world. The woman who is driven to the verge of nervous prostration by her semiannual bout with the powers of dust and moths in a small house or apartment would probably stand aghast at the task of a hotel manager who must clean and refurbish his hotel, and yet be ready to receive the travelers who may appear at this inopportune time.

The housewife who discovers that one of her precious spoons has been stolen by a dishonest maid, or some of her finest dishes have been nicked, sheds a few futile tears. The manager of a hotel loses thousands of dollars every year in silverware and table furnishings, which are taken, not by help, but by guests of the house, who carry them off as souvenirs.

Spoons, forks, salt-shakers, small individual breakfast castors, tete-a-tete sugar bowls, creamers, after-dinner coffee cups and saucers, all these fall prey to the tourist who thinks it is clever to carry away hotel souvenirs and the proprietor of the hotel has come to regard it as another avenue of expenditure.

The American public which can afford to stop at a high-priced hotel has gone luxury mad, and carpets must be thick and velvety under foot, so there is no turning of the economical ingrain. The carpets must be disposed of either by selling to smaller hotels or private parties, or through auction rooms.

The replenishing of linen costs \$10,000 a year, and as much more is required to purchase new china and silver service. New furniture and carpets, together with the wages paid to help, will bring the cost up to \$50,000.

The house cleaning force is called in about the middle of June and works until the middle of September, which presumably is a slack season for hotels in large cities. The hotel has its own upholsterer, carpenter and mattress shops. Carpets are sent out to be cleaned, but are reweaved and laid by the hotel force.

The rooms are torn up in sections, so that some parts of the house are always ready for guests. The decorations, papering and oiling of the wood-work are done by contract. The furniture is removed to the cabinetmakers' shop in the basement, where it is all done over.

The mattresses are recovered or filled, according to the need, and pillows are treated in the same way. Curtains are taken to a different department, where expert darners take them in hand, which accounts for the long life of a real good lace curtain, as, if properly handled, they will wear several seasons. Tapestry hangings and oriental rugs are treated the same way.

In the meantime the managers of the hotels have gone on their annual jaunts to Europe, or to some mountain resort, the famous chef is off on his yacht for a brief respite from the onerous duties of catering to millionaire appetites, and midsummer finds the heads of the various departments, such as the housekeeper, the head of the linen room and the steward, left to carry the house cleaning to a successful and satisfactory issue.

The floating population of such a hotel is equal to that of a small city. Even in midsummer, with housecleaning at its height, pilgrims for pleasure who are stopping en route in New York bring this population up to a thousand souls. In midwinter it is increased to 1,500, and some idea of the services demanded by rich travelers can be imagined when it is learned that 1400 servants are required to cater to the needs of the 15000 guests.

Let the woman who has hysterics because her husband brings home a guest during the house-cleaning days ponder on the duties of the hotel housekeeper and decide that she has no corner on trouble.—*Washington Star*.

Origin of the "Best Man."

The barbaric bridegroom secured his mate by one of two methods—capture or chase. Wooing was a form of girl-stealing. According to the former method, the groom started on the warpath with some chosen companion. This may be the origin of the "best man"—"who knows! The best man and the wooer had to go in full uniform and armor, for in those strenuous times the father-in-law and mother-in-law either succeeded in putting the wooer out of the way the first time he called, or else he made away with the daughter—took to the woods or the plains, as the case might be, with spears, boomerangs, jagged flints and arrows showering after the retreating party, as we now throw slippers.

Respect to Hamlet's Memory.

A railway is about to be constructed near Elsinore, which will run across the spot traditionally believed to be the grave of Hamlet. Numerous signed protests against the projected railway have been addressed to the government.

CIGARETTE SELLING SYSTEM.

How Each Customer is Automatically Supplied With Favorite Blend.

Writing of the application of system to large businesses, Atherton Brownell says in World's Work: Systems have been devised, by which, with the aid of a single clerk, a more minute and accurate record can be kept of a great business house than could be kept by a large force of accountants. A good example of a perfect system is the one used by a firm of cigarette makers who have a private trade, for they make their goods to order for individual customers.

The characteristic feature of their business is that they mix the tobacco to suit each individual customer's taste. They must have direct communication with their patrons, and these patrons buy as few as 500 cigarettes at a time. To get their trade is easy; to hold it is more difficult. On their files, they carry a memorandum of the tastes of perhaps 2,000 smokers and the formula of the mixture which suits everyone best, together with a design of his crest or monogram, which he desires stamped in his wrappers. Every customer's daily consumption is noted and by the automatic operation of their system, his name comes to the front a week before he may be reasonably expected to have exhausted his last order. So nicely has this system been adjusted, that recently, during a spell of extremely humid weather, when orders could not be filled, every customer found his wants supplied, during this period of waiting, from a stock kept on hand for the purpose.

We All Eat Too Much.

As the result of his exhaustive experiments with a squad of United States soldiers doing heavy gymnasium work under restricted diet, Prof. Chittenden, of Yale, concludes that most people eat too much.

The men were worked hard in gymnasium and gained steadily and greatly in strength while they were being fed far less than the average diet.

They were called the "Starvation Squad" but their photographs taken at the close of the experiment do not look like those of starving men, rather like those of competent gymnasts. Says Prof. Chittenden in his recently published "Physiological Economy in Nutrition": "Our results . . . justify the conviction that the minimal protied requirements of the healthy man under ordinary conditions of life are far below the generally accepted dietary standards, and far below the amounts called for by the acquired tastes of the generality of mankind. The amount of protied or albuminous food needed daily for the actual physiological wants of the body is not more than one-half of the protied food ordinarily consumed by the average man. Body-weight (when once adjusted to the new level), health, strength, mental and physical vigor and endurance can be maintained with at least one-half of the protied food ordinarily consumed."

Protieds are the chemical elements that most people get by a meat diet, through beans, peas and some other vegetables are also strong in protieds. Eat less meat is the practical equivalent of Prof. Chittenden's advice. It has been noticed by amateur mountaineers that Adirondack guides and Swiss mountain men eat less solid food than the average Wall street broker, who does little physical labor.

Learning French.

I recently visited the most famous international institute in Switzerland, writes "N. R. C." in the London Mail, and was enabled to witness the whole system by which splendid linguists are turned out.

As soon as the boy arrives he is told that he must speak French, and on every occasion he speaks his mother tongue he is given a certain number of "lines" to write out. These are usually in French and German.

Take French as an example. Say the pupil is English, and does not know a word of French. He is shown a huge illustrated map with all kinds of animals, trees and common objects in colors. The master will point to an animal, the boy is told the French for it, and in a very short time he knows the name of every object on the map. The whole time he is being spoken to in French and getting accustomed to the sound.

One little chap informed me that he was English. He spoke French and German with great fluency, and he had a fair smattering of Italian. "How long have you had this youngster?" I asked the head master. "Oh, he's only been with us a year and a half; but come and look at his written work."

This youngster's French and German were excellent and his Italian fair.

Coins a New Word.

An Ohio man wrote to Elmer Dover, secretary of the Republican national committee, claiming to have done great work for Roosevelt in the campaign, and asking for a job. He said he would like to be "chief cuspidorian" of the Treasury Department. Mr. Dover wrote in reply: "I regret to inform you that there is no such position as chief cuspidorian of the Treasury Department, although I think there might very well be. Unfortunately, however, while you have coined a word, I cannot coin the job."

Coins a New Word.

Prof. Korn of Munich has presented a report to the Bavarian Academy of Sciences stating that he has perfected a system for transmitting photographs, sketches and facsimiles of signatures over ordinary telegraph wires. Any photograph, he says, can be transmitted over a wire 1,000 miles long in twenty minutes.