

THE ELECTRICAL WORLD

TELEPHONE IN NOVEL TEST

Successful Experiments Made With New Device in England—Communication Under Water.

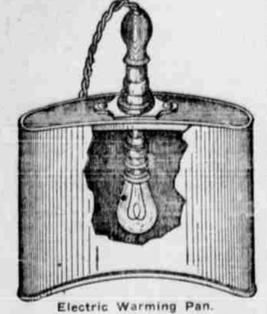
Albert Hinstead, United States consul at Birmingham, England, in a recent report says:

The following paragraph in regard to tests of an instrument to telephone through water without wires appeared in a recent issue of a prominent technical publication:

HOW TO MAKE WARMING PAN

Arrangement Has Proven to Be of Much Assistance in Many Kinds of Stomach Troubles.

When Dickens, in one of Mr. Pickwick's celebrated speeches, laid emphasis on warming pans, he little dreamt that even these might some day be classed among electrical devices, yet such is the case. Any mechanic can make a simple type such



Electric Warming Pan.

As we are picturing, which consists of a flat and preferably curved tin case with an opening at one end through which an ordinary incandescent lamp can be introduced, says the Popular Electricity. The opening is closed by a flange bolted to the end, which flange supports both the lamp socket and the receptacle for an attachment plug through which the patient can disconnect the device from the circuit without reaching for a switch.

Of course this arrangement is neither as convenient nor as adaptable as the more recent heating pads made of resistance material imbedded in a flexible mat or webbing, but it is easily made by any mechanic and has proven helpful in many forms of stomach troubles. Indeed it is one of the electrical appliances for which the summer with its severe strains on our digestive apparatus brings no less a demand than does the winter.

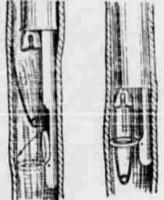
Exhaustive tests have recently been made by Mr. A. W. Sharman with instruments invented by him for telephoning through water without wires. The microphone used in speaking is connected in series with a battery of four or five dry cells and an impulse coil, the coil being of special construction and giving very short, induced currents of high potential, which are communicated to water by two wires connected to the terminals of the coil and terminating in plates buried in the sand or submerged in the water. Two similar plates, connected direct with a very low-resistance telephone receiver enable the speech to be "picked up" at distances of a mile and more.

The speech transmitted through the water has been very distinct, and the system has shown good possibilities for use as a means of verbal communication between two ships, such as a battleship and a submarine. The effect is very directional, and another advantage is that with a small tuned buzzer telegraphic signals can be transmitted through the earth or water for a distance of several miles. The primary energy required is extremely small, four watts sufficing to telephone over a distance of two miles.

EXTRACTING A SAFETY PIN

Accompanying Illustration Shows Operation by Means of Instrument Called "Endoscope."

The accompanying illustration shows the operation of removing a safety pin from the throat by means of an instrument called the "endoscope." Its construction is so simple that an explanation is hardly necessary, except that it should be mentioned that the pin-extracting device, which slides in the tube of the instrument, is only



Removing Safety Pin.

one of the many accessories that may be used in connection with it, says the Popular Mechanics. Among these accessories is an electromagnet for removing particles of iron, pliers for extracting bones, etc. by means of a suitable optical arrangement the surgeon has the object to be removed in full view during the operation.

Lighthouses Without Light

Lighthouses without light are about to be established by the French government. Instead of lights hertzian waves will be made use of, and in this manner vessels properly equipped will be enabled to receive warnings in time of fogs when the ordinary lighthouses are useless, so far as shedding their warning rays abroad. Officers of these vessels will be enabled to determine accurately the direction from which the hertzian warnings are being received, and so get their bearings. Three of these stations are to be established, and the sites selected are in the vicinity of established lights which are known to mariners.

Basis Metal for Electroplating

In a discussion at the annual meeting of the institute of metals the properties considered in deciding upon the grade of German silver to be used as a basis metal for electroplating were strength, color and malleability. However, where thick coatings of silver are concerned whiteness should not be considered as a matter of such prime necessity as the perfect adherence of the silver under conditions of wear, since strength is of more importance than color.

Trolleys in China

Peking, China, the only world capital without a street car system, is about to be invaded by the trolley, arrangements for the construction of an electric line having been finally completed after months of negotiation.

ELECTRICAL NOTES

Motor Buses Run Between Jaffa and Jerusalem

One-third of Great Britain's telegraph operators are women.

Ramie Fiber for Lamps

Ramie fiber for incandescent lamp mantles has proved superior to cotton, because the individual fibers are much less closely entangled producing a much larger glowing surface. In late experiments with artificial silk the separation was even greater. After much investigation a Berlin company has prepared a new mantle, using artificial silk, and this is claimed not only to yield a more brilliant light but to be more elastic, supple, and durable. It is expected to be specially adapted to street lighting and all purposes where high pressure gas is employed.

Light of Ordinary Firefly

Prof. McIntosh says that a temperature approaching 2,000 degrees Fahrenheit would be necessary to make a light equivalent to that emitted by an ordinary firefly. The enormous waste of energy in all industrial methods of producing light is a matter of common knowledge, and the example of the firefly remains unimitated by man.

NEW NEWS of YESTERDAY

By E. J. EDWARDS

Tale of Broken Appointments

Strange Way in Which Public Came to Learn of Operation on President Cleveland's Jaw While Aboard Benedict's Yacht.

In August, 1893, there was printed a newspaper report that told in detail of a serious operation performed upon the upper left jaw of President Grover Cleveland while he was at sea on the yacht of his friend, E. C. Benedict of New York. The report was in the best sense of the word sensational; the operation was the sole topic of national discussion.

For some time thereafter the truth of the report was disputed by several newspapers, and it was thought advisable by those who were near President Cleveland at his summer home at Buzzard's Bay to give out a qualified denial of its accuracy. But later, the late Daniel S. Lamont, then Cleveland's private secretary, who was with Cleveland at the time the operation was performed, confessed to me that his account of the operation on the president was so amazingly accurate that it had been described to me by some one who was in the presidential party at the time of the operation. The president had been taken to sea upon Mr. Benedict's yacht chiefly for the purpose of surrounding the operation with secrecy.

I have been asked many times how I obtained my information of the operation. This is the story, which I am now at liberty to tell:

Upon my return to my home from a brief vacation in August, 1893, I found my family physician, the late Dr. Leander P. Jones of Greenwich, Conn., waiting to see me. Dr. Jones was the physician of E. C. Benedict, of Henry O. Havemeyer, president of the Sugar trust; of Andrew Carnegie, and of the Rockefellers when their home was in that town. He said to me as we met: "In the most extraordinary way I have learned that a very difficult operation has just been performed upon Presi-

dent Cleveland. I can tell you the story in detail without any violation of professional confidence.

"It so happened that I had a patient on whom an important, almost heroic, surgical operation was to be performed. I engaged the services of one of the ablest surgeons in New York and the day and hour were fixed for the operation. I was greatly alarmed when this surgeon did not appear at the time set, nor did he appear until two days later, when in the condition of my patient was desperate indeed. I asked him for an explanation of his delay and he gave it to me in these words:

"I went by appointment to New London, Conn., five days ago to perform a last resort operation. I had engaged Dr. Hasbrouck of New York city to meet me at New London and administer nitrous oxide gas to the patient. Dr. Hasbrouck assured me that he would be in New London on a certain train, but he did not come. I telegraphed to his office in New York and in reply was informed that his assistants did not know where he was.

McKinley in Misfortune

William S. Hawk's Story of the Fortitude With Which the Ohioan Met Financial Disaster That Searingly Ended His Career.

William S. Hawk, president of the Ohio Society of New York city, one of the largest of the state organizations of the metropolis, was for many years as intimate a personal friend as William McKinley had. The intimacy began in Canton, Ohio. "I always knew that McKinley had strength enough of character to meet courageously, without flinching, any

emergency, however, serious; I was perfectly prepared for the fortitude and the beautiful resignation which he displayed after he was laid low by the assassin's bullet. His conduct at that time was exactly what I would have predicted," said Mr. Hawk recently.

"But I think, after looking back over my years of close intimacy with him, that possibly the finest example of his courage, of his ability to stand up against most grievous emergency and embarrassment, occurred at a time when he was a guest at my home in New York city.

Death Merciful to A. T. Rice

Appointed Minister to Russia, He Could Not Have Maintained That Position, for His Once Large Fortune Was Dissipated.

Very few persons probably now remember the late Allen Thorndike Rice, and to the younger generation the name means absolutely nothing. Yet twenty-five years ago Allen Thorndike Rice was thought to have the most promising future of any young Republican of New York state and was deemed a more interesting and piquant character than even Theodore Roosevelt, with whom Rice was intimately associated in politics of the late eighties.

May Open Lands to Entry

Washington.—The senate on Thursday passed the Gamble bill opening to agricultural entry 1,200,000 acres of land on the Cheyenne Indian reservation in South Dakota.

Foreign Wheat Accege

Washington.—The International Institute of Agriculture at Rome, Italy, has called the United States Department of Agriculture the following foreign crop information: The area sown to winter wheat in Belgium this season is 104 per cent of last season's area; in Spain 95 per cent; in France 112 per cent; in Great Britain 100 per cent; in Canada 97 per cent. In India 89 per cent.

Want Lower Rates

Excessive freight rates and unfair competition in the state were the chief objects of discussion taken up by the State Association of Monument Dealers which met in Lincoln. Many of those present argued that the trade is discriminated against in this state by the railroads, in that marble for buildings and construction work is differently classified in the freight schedules. An effort will be made to take this matter up with the interstate commerce commission for adjustment.

Big "Catch" of Whales

The people of Baliallan, a village on Loch Erlisort, Isle of Lewis, in the Outer Hebrides, have had an exciting and profitable experience. Fishermen sighted a school of 34 whales and drove them up the loch until the entire male population of Baliallan formed a bridge of boats across the loch to prevent the whales from escaping and drove the big fellows into shallow water, where they were killed.

Is Made Vicar General

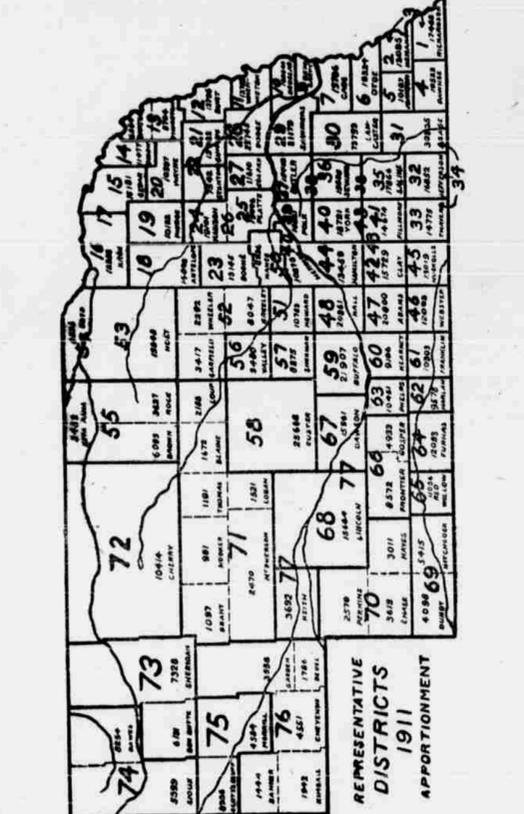
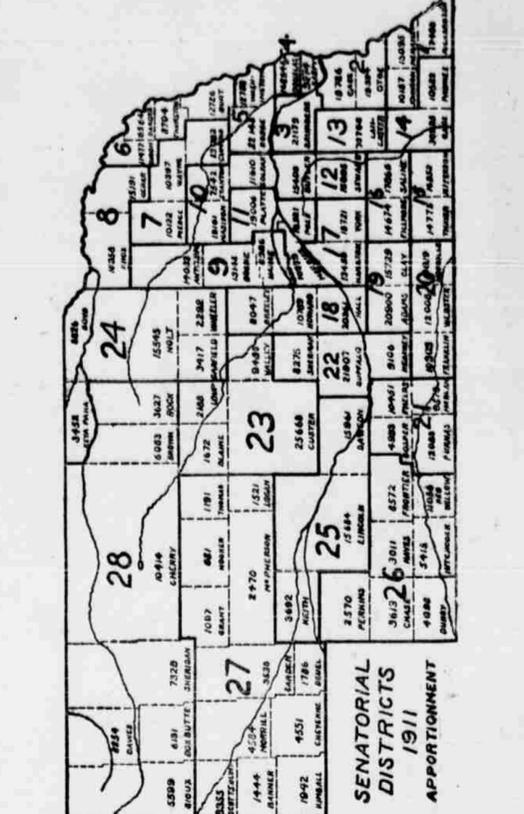
Dubuque, Ia.—Archbishop John Keane, retired, was appointed vicar general of the Catholic archdiocese of Dubuque by his successor, Archbishop James J. Keane.

Brown Inaugurated Governor

Atlanta, Ga.—Joseph M. Brown was inaugurated governor of Georgia Thursday. This is Brown's second term, the brief tenure of Hoke Smith, who resigned to become United States senator, intervening between the two Brown administrations.

NEBRASKA'S NEW APPORTIONMENT

Senatorial and Congressional Districts as Arranged by Act of the State Legislature



Ben Craven Found Guilty. Guthrie, Okla.—Charles J. Maust, under trial under the name of Ben Craven for murder, was found guilty by a jury in the federal court. Punishment is life imprisonment.

Discussion of Rates. Kansas City.—Railroad rate experts from six middle western states, composing a special committee of the National Industrial Traffic league, met here on Thursday to discuss the rate ruling known as western classification No. 51, which is to go into effect February 15. The ruling affects all railroads between the Mississippi river and the Pacific seaboard. It submitted more than 1,700 subjects recommending changes in ratings on about 5,000 articles in the new order of things.

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Wanted a Heavier Sentence

Mike Murphy almost had a serious argument in Judge Wilson A. Taylor's court because the prosecution wanted to send him to the workhouse for one month instead of two. Murphy, when arraigned on a charge of sending in false alarms of fire, said he desired to plead guilty, and blamed his predicament to drink. He urged Judge Taylor to send him to the workhouse so he might "get the booze out of me."

"All right," said the court, "but how long do you think that will take?" "Sixty days, sor," said Mike, and a corresponding order was entered by the court.

"I was about to recommend a sentence of thirty days," said Assistant Circuit Attorney Charles B. Davis, "in view of the plea of guilty."

Mike was still inclined to think a 60-day sentence would serve him better.

"I'll sentence you to thirty days," said Judge Taylor, "and if, at the end

of that period, you still think all the whiskey is not out of your system, send me word and I'll sentence you to thirty additional days."

Murphy accepted the arrangement. —St. Louis Globe-Democrat.

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Pleasant Words

"Was there anything complimentary written about your show?" "Yes," replied Mr. Stormington Barnes, "most of the tickets."

Moving Pictures in Schools

A school superintendent in a little Louisiana town has hit upon a scheme for making the now universal moving-picture show of real use, as well as amusement, to her flock. Noting the great interest of the pupils in the weekly offerings at the town's one "theater," she arranged with the management to give the youngsters something worth seeing and at the same time an aid to them in their studies. Thus the boys and girls in advanced classes have seen their "Year of Wakefield" presented pictorially and their Shakespeare made vivid on the shimmering screen. Scenes based on historic happenings have also had their place and have served to awaken interest in study that had long been looked upon as drudgery. Of course the picture people are glad to present whatever the teacher asks, as they are assured of full houses of appreciative spectators. —New York Tribune.

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