

THE ELECTRICAL WORLD

MANY DANGERS OF WIRELESS

Operator's Exposure to Electric Currents of Great Power Regarded as Menace to Health.

"Marconi," said a physician, "is at present fighting an infringement of his wireless telegraphy patents in London. My colleagues in Paris are also engaged in a wireless-telegraphy campaign, but theirs is not a mercenary but a humanitarian campaign. For it is becoming apparent that the wireless telegraph operator's exposure to electric currents of great power and frequency is so dangerous to his health as to require investigation by the French Academy of Medicine.

The violent action of the electric sparks on the eyes of persons receiving wireless messages is often the cause of serious trouble—eczema of the eyelids, nervous palpitation of the eyes, etc. The nervous system of wireless operators is also affected, and the French medical faculty, realizing the unfortunate accidents to the pioneers of X-rays, wish to safeguard the pioneers of wireless telegraphy.

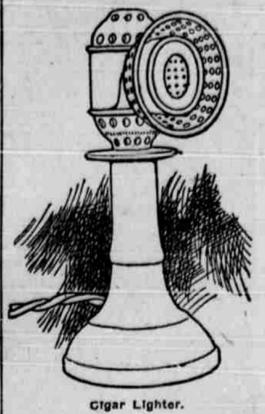
"Prompt medical action in the wireless operator's case is the more urgent on account of the increasing popularity of the wireless system. At present no fewer than 20 countries possess wireless stations, comprising 128 installations on land and 1,058 on steamships and cruisers.

"Thus far the health campaign for the wireless operator's benefit has had, I regret to say, very slight success."

CIGAR LIGHTER QUITE HANDY

Made With Substantial Base and Heating Element is Contained in Projection on the Side.

No doubt the desk telephone, which is so indispensable in all offices, suggested the unique design of the cigar lighter shown herewith. This lighter is made with a substantial base and the heating element is contained in a



Cigar Lighter.

projection on the side which looks very much like a telephone mouth-piece. The wire from the lamp socket lead into the base and being flexible permit the lighter to be moved around readily over the counter or show-case.

TELEPHONE AT SOUTH POLE

Captain Scott, Searching for Earth's Lower Extremity, Took With Him Complete Equipment.

A telephone system is to be installed at the south pole, or as near to it as explorers can get. Captain Scott, who is now in the Antarctic regions on a search for the earth's lower extremity, took with him a complete telephone equipment, consisting of five sending and receiving instruments, a number of light poles and six drums, each containing 13 miles of aluminum insulated wire. The drums are so made that they can be attached to the rear of a sledge and the wire laid on the snow as fast as the sledge moves forward.

Uninsulated wire was selected because of its lightness. It is believed that the extreme dryness of the atmosphere will make insulated wire unnecessary and the increased conductivity due to the extremely low temperature will more than compensate for any leakage of current. The telephone receivers and transmitters are made of wood because it is feared that ebonite would crack under the effects of the extreme cold.

It is planned to run several lines from a central station, one to an observatory a mile away, another to a post in the open air five miles distant and another to the explorer's headquarters 26 miles distant from the central station. This telephone system will be of great assistance in enabling simultaneous photographs to be taken.

FOR ELECTRIC LIGHT CORDS

May Be Shortened or Lengthened by Device Invented by Maine Man—Doesn't Solt Hands.

Everybody is familiar with the little wooden device by means of which electric light cords are



Handy Lamp Adjuster.

shortened or lengthened. Two men in Maine have designed another method of regulating the length of the cord, which is here shown. Depending from the ceiling is a cord which has an arm hinged to it. The arm is made in two parts, and the cord runs between them and passes over a wheel at the top. When the arm is pushed up parallel to the main support, the cord is at its greatest length. When the arm is drawn down it pulls up the cord to outline the two sides of the triangle formed, thus shortening the cord and raising the globe at one stroke. With the device heretofore in use both hands are required, and if the cord happened to be dusty, as is often the case, especially in offices, the hands are soiled in the operation.

Multiplex Telephony.

As a result of recent experiments by the signal corps of the United States army, multiplex telephony is now practical, whereby several independent conversations may be carried on simultaneously over the same wire circuit. Another important discovery, calculated to double at least the capacity of the existing telephone lines, is that it is no longer necessary to use two wires, or what is known as the "return wire" for efficient telephony, but that a single wire with "silent earth" connections, can be used for multiplex telephony.

The new system is entirely practical and has long passed the experiment stage, as a single wire circuit is now being used by the signal corps of the United States army.

Watch Tells Time in Dark.

It will now no longer be necessary for one to fumble in the dark for a watch in order to tell the time by his watch. A jeweler has invented a watch which will show the time, day or night, without the aid of artificial light. Placed around the dial of the watch, at every hour mark, is a small circular spot of a material which glows in the dark. A double spot is placed by the figure 12, so that the position of the dial is plain. The hands carry the same illuminating material, with a marked difference in design to distinguish the minutes from the hour hand. Used anywhere in the dark—by the side of the bed or out of doors—the time can be seen at a glance.

A Voice From the Depths.

When the German submarine V3 was sunk in Kiel harbor the commander sent a telephone buoy to the surface, by which means the rescuers were told that the crew of the submarine had oxygen enough to last them 48 hours, so that there was no more hurry than was necessary. Unfortunately, communication with the buoy was stopped afterward by water getting into the submarine. By this time, however, the boat had been raised so far that communication could be resumed by making Morse signals on the conning tower by

CORRECT TIME BY WIRELESS

Apparatus Devised by French Inventors for Use in Offices, Stores and Ships at Sea.

Wireless apparatus for transmitting the correct time direct from the ob-



Receiving Correct Time by Wireless.

servatory to offices, stores and homes on land, and ships at sea, has been devised by two French inventors, says the Popular Mechanics. Just such a method of correcting clocks was predicted by James Arthur in his series of articles on "Time and Its Measurements."

ELECTRICAL NOTES

Frederick Upham Adams, the novel list, is the inventor of several electric light devices.

An electrical dredge on the Yukon river has a capacity of 10,000 cubic yards of earth a day.

Telephonic service is now open between Moscow and Nijni Novgorod, a distance of 276 miles.

The present system of British telegraphy all over the world embraces 1,111,356 miles of wire.

One of the newest electrical office devices is a machine which will seal, stamp and keep a record of 150 letters a minute.

Electricity now does practically all the work in the kitchens of the United States Military academy at West Point, N. Y.

A new electric pressing iron is equipped with metal plates, which can be inserted to increase its weight when desired.

An electric searchlight to be attached to the barrel of a gun to aid a hunter to see game at night is a German invention.

Driven by an electric motor, an ingenious machine has been invented to paste paper labels on bottles, no matter what their shape.

A new insulator for use in electrical work is made by the condensation of phenol and formaldehyde and much resembles Japanese lacquer.

The average cost of telephone exchange maintenance is said to be much greater under government ownership than by private corporation.

NEEDLEWORK

LINEN is perhaps more used than any other material when embroidery is to be done for art, household purposes and wearing apparel.

Much as we use linen nowadays, for our table, our beds and our bodies, it is ages old, as for centuries linen embroidery has been a domestic industry in foreign lands.

This old work is now being copied widely and the special work belonging to different lands is easily recognized. Thus the old Spanish, Italian and Greek embroidery on the linen was chiefly done in one color—a purple red. A great variety of colors mixed with gold and silver thread is characteristic of Oriental work.

A similar richness of coloring, but generally without the gold and silver touches, marks the Hungarian, Slav, and Swedish peasant work. Old blue and yellow are the predominating tones.

Much of the Italian embroidery of the sixteenth and seventeenth centuries was done on very fine linen sometimes in colors, but more often in white, with intricate stitchery and much cut and openwork. The modern girl, however, rarely has patience for this exquisite stitchery of the olden times. Her work is more splashy and less beautiful.

For this reason the quality of the linen used today are changed, the threads being round and coarser, so they can easily be counted to make easier the copying of the design. The old embroideries, especially the Italian ones, were done on very fine linen.

In choosing a linen to embroider it should be hand-bleached, and without much dressing. The threads should be round, especially if any drawn-work is to be combined with the embroidery. There are special art linens for fancy work which are quite distinct from the linens used for sheets and pillow cases.

Unless you are sure you can detect cotton threads and imperfect weaving, it is well to leave the selection of your linen for an elaborate piece of embroidery to a saleswoman in the art needlework department. She will gladly advise you the best grade for your special purposes.

Linen embroidery may be classed under two heads—that where threads are counted, for the material according to a pattern done on checked paper, as in all cross-stitch work. Slav embroideries and various kind of canvas work; the other where the pattern is drawn on the material and the embroidery worked without regard to the threads of the material, as in English embroidery, satin stitch, Kensington, Chinese and Madeira embroideries.

No linen embroidery covers the entire ground of the material, but leaves spaces of the linen for a background to the design.

There are interesting imported linens to be found in most establishments that are adapted to both kinds of linen embroidery. Besides the Irish linen there are Spanish, Silesian and Algerian linens for small stitches and fine work, while the coarser linens of Cuba, Ceylon and Batavia are used for bolder effects and coarser stitchery, and Russian linens and the different kinds of canvas gives stitches of any desired size.

Most of these can be found in white cream and ecru, and many of the so-called art linens come in varied tones of any given shade.

Though the old-time embroideries were rarely done on cotton goods we think nothing of putting handsome stitchery on cotton materials sheer and opaque. It is better, however, to make such embroidery sketchy, as the material is not worth fine work.

Unfrayed Scallops. Some housekeepers object to the buttonhole scallop on embroidery, because it frays in washing. This can be overcome in several ways. The surest is to buttonhole a second time over the purled edge, when the scallop has been worked and cut out.

Another method is to run the outline of the scallop with machine stitching before buttonholing. Or in cutting leave a narrow margin and turn back under the scallop and hem to the material.

If these are too much trouble, at least wash the linen before cutting out. The material shrinks and is much less likely to fray. Where the entire piece is not washed, the embroidered edge can be dipped in lukewarm water for a few minutes, then ironed dry and later cut out close to the purled edge.

Turkish Mats. If you are the fortunate possessor of a Turkey rug or mat, don't allow it to wear into holes without trying to remedy matters. Go to an upholsterer and ask him to give you a small bundle of odd pieces of wool and a suitable needle. Then, when you find a weak spot, go down on your knees and darn the place—of course matching the wool as closely as possible. It is really astonishing what good results one gets.



Dainty Costumes

THE dainty frock at the left is of white voile made up over pink taffeta. It is in empire style, shirred at the top and again at the bottom, where it is finished with a ruffe edged with Irish lace. It is trimmed with folds of the pink taffeta and Irish lace insertion.

The one on the largest girl is of white plique. The skirt is encircled with a wide band of English embroidery and with tucks which are embroidered with dots. The jacket is

trimmed in the same way and ornamented with pearl buttons. The collar is of English embroidery bordered with the dotted bands.

The charming little coat is of light blue alpaca. One side of the front is turned back to form a large revers and the coat is trimmed in front and back with straps of the material fastened with gold buttons. The collar and cuffs are of gurgulee finished, to look their best, with little plaitings of lace.



IN VOGUE

White for all occasions is to be worn this spring and summer. All kinds of laces are in use—heavy ones and the daintiest and finest.

High, small turbans are trimmed with cabochons of garden flowers on the side.

Shorter sleeves are looked for in the models that are to be worn in the coming summer.

New News of Yesterday

by E. J. Edwards

Son Sponsor for His Father

How Paul Morton Helped His Embarrassed Parent When Cleveland Offered the Latter a Portfolio in His Cabinet.

Early in the winter of 1893 J. Sterling Morton of Nebraska, who founded at Nebraska City the first newspaper to be published in the state, and who was once acting governor of the territory of Nebraska, and Democratic candidate for governor after the territory had been admitted to the Union, received from a close personal friend of President-elect Grover Cleveland a letter in which it was said that Mr. Cleveland would be glad to see Mr. Morton at the temporary home occupied by Mr. Cleveland at Lakewood, N. J. There appeared to be no other explanation for this invitation than that Mr. Cleveland had in mind the offering of some office to Mr. Morton. The communication perplexed Mr. Morton a little. He had not been numbered among Mr. Cleveland's western friends in 1894. Moreover, he had devoted himself exclusively to agriculture for about thirteen years. However, Mr. Morton felt that it would be courteous for him to accept the invitation and so notified his correspondent.

On his way east Mr. Morton met the late Paul Morton, his son, then prominently known in the railroad and fuel worlds.

"Paul," said the father, "you know I am very rusty about politics. I never had much experience in it except the little I gained when I was in Nebraska legislature and a candidate for governor. I feel that I would hardly know how to bear myself if I should be brought into personal touch with the eastern politicians when I call upon Mr. Cleveland. I would be much easier in my mind if you would accompany me east."

Paul Morton had an intuitive belief that Mr. Cleveland wanted to offer his father the post of secretary of agriculture, and because he was extremely anxious that such an honor should come to his father he consented to drop business and accompany him east.

Together father and son—because the former insisted on the appointed day went to the cottage at Lakewood which had become familiarly known as "the little White House," so-called because

cause Mr. Cleveland was making there all of his arrangements for his return to the office of president. Mr. Cleveland was looking forward to meeting the father alone, but when he beheld the senior Morton's embarrassment at their exchange of greetings he quickly understood the situation, and as though everything was just as he had expected, he began to speak of Mr. Morton's high authority as a farmer and of the valuable work he had done in that field in Nebraska.

In the first pause, the elder Morton, not trusting himself to reply, looked timidly towards his son, who instantly took up the thread of the conversation, giving the proper answer. After that the president-elect, though speaking to the father, looked steadily at the son. He realized that the younger man was standing sponsor for the older.

At last Mr. Cleveland tendered the secretaryship of agriculture to Mr. Morton substantially in these words: "Mr. Morton, this interview has determined me to ask you to accept a place in my cabinet as secretary of agriculture, and I shall be very glad if you will accept it."

By this time Mr. Morton's embarrassment had well-nigh overwhelmed him, and he felt himself in no condition to trust to his own judgment. Again he looked in the direction of his son. He caught an encouraging and affirmative expression on the young man's face and, assured, he turned to the president-elect.

"Mr. Cleveland," he said, in his sole speech of the interview, "I greatly appreciate the honor, and I shall be glad to accept the offer you have made me of a place in your cabinet."

Mr. Cleveland extended his hand to Mr. Morton and led him to the porch of the cottage. Paul Morton remained behind, looking at the chair in which Mr. Cleveland sat as an heirloom. "After awhile he hunted up Mr. Nathan Straus, owner of the cottage.

"Mr. Straus," he said, "my father has just been offered a place in Mr. Cleveland's cabinet and he has accepted the offer. It is a very great honor; I appreciate it more than I can tell. I am very anxious to secure some visible memento of this event, and I am going to ask you if you will let me buy the chair in which Mr. Cleveland sat when he offered the cabinet appointment to my father. Our family has owned it as an heirloom."

"No, you cannot buy that chair," replied Mr. Straus, "but I shall deem it an honor if you will accept it for a gift."

In that way Paul Morton secured one of the most treasured of his mementoes.

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Refused to Become a Diplomat

Prescott Was Offered the Position of Minister to Holland, but Declined on Account of His Partial Blindness.

Recently I told of the half-fulfilled prophecy made by the famous publisher of Longfellow, Hawthorne, Lowell, Emerson, Whittier, Holmes and other great writers of that "golden age" period regarding the coming of the present-day school of writers on the life of the west. Today I tell of Mr. Field's opinion of the historian Prescott and a little known fact relating to him, as they were told to me by Mr. Fields. Of all the great writers in the English language with whom Mr. Fields had intimate personal association, it seemed to me from his manner when he talked to me of Pres-

cott that he held that well-nigh blind portrayal of American civilizations of other days in highest personal esteem.

"Ah," he was a grand character," said Mr. Fields, a day or two after he had returned, in the late seventies, from what was to be his last trip abroad. "He was as grand a character personally as he was intellectually. I once asked him if it were true, as I had heard, that when he learned that Mr. Motley, the historian, was writing a history of the rise of the Dutch republic he at once abandoned the purpose, which he had long contemplated, to write a work of that character. He told me in reply that he had collected a great deal of material for and had outlined the plan of such a history; but he learned by mere chance that Mr. Motley had already begun a similar work, so he abandoned his own plan and offered to send all of the material he had collected to Mr. Motley. That was some time before Motley set sail in 1851 for Holland to continue his researches for the history that has given him lasting fame.

"I asked Mr. Prescott if he did not think there was room enough for two histories on the subject. His reply was characteristic: 'Mr. Motley was first in the field; he had the right of pre-eminence.'

"I have always thought that was as noble a thing as any man of letters ever did. And I have sometimes regretted," continued Mr. Fields, whose eyesight, peculiarly enough, was defective, as was both Prescott's and Parkman's, whose publisher he was, "that Mr. Prescott was not willing to listen to the hint that if he were willing to accept the offer he could receive appointment as our minister to some one of the European courts."

"When George Bancroft, who some years previously had published his great history of the United States, entered Polk's cabinet as secretary of the navy in 1845, he was amazed that American literary achievement should receive some official recognition from the new administration other than that conferred upon him. To that end he talked with the president, and was authorized to convey a hint to Mr. Prescott that the president would be glad to appoint him to some personally satisfactory diplomatic post in Europe. But when the hint was taken to Mr. Prescott he made it clear that however greatly he would appreciate the compliment of an appointment, it would be impracticable for him to serve in any political capacity."

"I was not so much his friend that I position under the government would interfere with his literary labors that kept him from looking kindly upon the hint. The thing that stood in the way in his mind was his partial blindness—he could see but dimly. I am sure that he was afraid that that affliction would prevent him from doing his full duty by his country. And I am also sure that but for his affliction, he would have been very glad and happy to serve as United States minister to Holland."

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How Burnside Got His Toga

Collapse of William Sprague's Financial Affairs Caused His Retirement and Left Vacant That the General Filled.

Of all the men of military renown gained in the Civil war who served in the United States senate during the two decades following Appomattox, none attracted more attention than did Ambrose E. Burnside of Rhode Island. Visitors to the galleries never failed to ask that John A. Logan and General Burnside be pointed out to them. Both were spectacular figures in the senate, but in a different way. Logan, with his swarthy complexion, long black hair and drooping black mustache, his Indian cast of countenance and his vivacity and energy, was like a moving picture upon the floor of the senate.

A few seats away from the one occupied by General Logan sat General Burnside. He was easily recognized. He continued to wear the familiar side-whiskers which, in war time, caused that form of beard to become universally spoken of as "Burnsides." He was very neat in his dress, being, in fact, one of the best dressed men of the senate, while Logan always wore the conventional black frock coat.

Burnside sometimes sat through an entire session of the senate without leaving his seat.

It was in the winter of 1881, the year of his death, that I met General Burnside. I took occasion to congratulate him upon his re-election as senator, and I said to him: "It is an interesting fact that you, the great military leader who came from Rhode Island in the Civil war, should have succeeded Senator William Sprague, who was the only governor in the east during the war to assume command of state regiments and take them into the field."

"I have sometimes thought," said Senator Burnside, "that as dramatic an incident of the war as any that I became familiar with was the manner in which Governor Sprague mobilized the first Rhode Island regiments and departed from Providence at their head only four days after President Lin-

coln's proclamation of April 14, 1861, was issued. You know, he became governor of Rhode Island when only 49 years of age; that was in 1860. He was a slender young man of medium height, with a faint black mustache and was of very fair complexion. I have heard it said that no young man in the United States had a greater public career in the future than he. As you know, he made a highly creditable record at the front from the first Bull Run through the Peninsular campaign, while still governor; he declined a commission as brigadier general, and was chosen United States senator in 1868, when in his thirty-first year. The next year he was brought more closely, if possible, to the notice of such men as Lincoln and his advisers by his marriage with the brilliant Kate Chase, daughter of the secretary of the treasury. Moreover, he was thought to be one of the rightest of the manufacturers of the United States. He and his brother Asa were the owners of great cotton mills.

"But here I am in the seat that he formerly occupied, and all because of an unexpected incident, the sudden collapse of Senator Sprague's political career.

"There has always been a good deal of astonishment expressed at the abrupt termination of Senator Sprague's public career, and a good deal of speculation, but the facts are simply these, as all his old friends in Rhode Island know well: With his brother he had developed a great water power over the line in Connecticut, and built what at the time was the longest cotton mill in the world—I think a little over 1,000 feet in length. It proved a most unfortunate investment. It was a heavier burden than even the great Sprague house could carry. Senator Sprague felt keenly the humiliation occasioned by the resultant bankruptcy. He determined to abandon all thought of a public career and devote himself to the rebuilding of his property. That and that alone was the reason why he gave up public life, and how, in 1875, I came to enter the United States senate."

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Cardinals' Number Reduced

Membership at Catholic College is Now the Smallest Recorded in Centuries.

The Catholic Colleg of Cardinals has now the smallest membership recorded in centuries, and the smallest proportion of Italians ever known. The traditional membership is seventy, and by the recent death of Cardinal Cavicchioni it is reduced to forty-nine. It is three and a half years since any cardinals have been created, and it is likely to be a year before a consistory is called, whereat alone new cardinals are proclaimed. A dozen of the forty-nine, and especially of the Italians, are ineffective by reason of advanced age. Cardinal Oreglia, the camerlengo, being eighty-three this coming July. Twenty-eight cardinals are Italian, twenty-one the non-Roman world. Cardinals Moran of Australia, Gibbons of America and Logue of Ireland represent the English-speaking

race. France has three, Germany two, Spain four, Austria six and South America, Belgium and Portugal one each. The late Patriarch of Lisbon, put out by the revolution some months ago, now lives in strict retirement. The curia, the cardinals stationed in Rome for work in the congregations and other general administration, is crippled for lack of numbers. The cardinal who has just died, a member of curia, gave active days at seventy-five years of age to congregations of the consistorial, sacraments, councils, both branches of propaganda, index, rites and studies, and on the commission for the codification of canon law, the last named exceedingly onerous and important.

Here's a tip for you, young man: "Be sure that the old gentleman will come across with the obese veil before you attempt the role of prodigal son."

Bible for Chinese Emperor.

The Chinese Christians about a dozen years ago presented the dowager empress with a magnificent copy of the Scriptures translated into Chinese. It was a fine example of modern penmanship, the writing being on silk and the covers of the Bible being of silver. The gift was graciously received and her majesty read the book. This excited the emperor's curiosity and he ordered one of the eunuchs to obtain for him a copy of the New Testament.

The books formed part of the loot of the Forbidden City in 1900. The emperor was a close student of the Testament, which was freely annotated by him. The Bible was found in the empress's chamber and at alone new cardinals are proclaimed. A dozen of the forty-nine, and especially of the Italians, are ineffective by reason of advanced age. Cardinal Oreglia, the camerlengo, being eighty-three this coming July. Twenty-eight cardinals are Italian, twenty-one the non-Roman world. Cardinals Moran of Australia, Gibbons of America and Logue of Ireland represent the English-speaking

Masses of foliage in the color of the hat, piled over the crown. Buckles, cabochons and other ornaments made of lace Tuscan and studded with corals or turquoise. Butterflies and fans formed by wide, pleated satin ribbon.

Heavy cord-shirred effects in ribbon garnitures of all kinds.