

THE ELECTRICAL WORLD

ELECTRIC STEAM FIREWORKS.

A Novelty in Outdoor Color Display Seen at Jamestown Exposition.

The latest thing in fireworks involves no fire at all—that is no fire that can be seen, for the most beautiful effects of color are obtained with electric lights and some clouds of steam. The current for the electric searchlights is secured from any convenient supply, and the colored screens are the same as used nightly in every theater, but the artificial clouds necessary as a background for the colored lights is interesting.

A good-sized portable boiler, on wheels, furnishes the steam which must be at about 75-pound pressure. The steam is conducted through iron pipes into frames of various shapes.



Electric Sunburst.

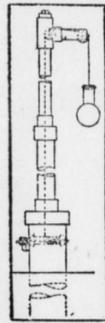
made of pipes with numerous small openings. The escaping steam rises in a sheet producing a moving cloud effect, and when the colored lights are played from ten or more searchlights the result is a novel delight. Not only colored lights but portraits, landscapes, marine views and moving pictures can be thrown on the clouds of steam in combination with changing color schemes, says the Western Electrician. One slide which calls out special applause is the American flag in its red, white and blue, and when this is thrown on the steam, the waving effect is perfect and it is hard to believe one is not actually looking on a silk flag 50 feet in length.

The flags of all nations will be displayed in this manner every night at the Jamestown exposition.

ELECTRIC LIGHT POLE.

It May Be Made from Pipes and Fittings.

The sketch shows a home-made electric light pole, several of which were made by a correspondent of the Practical Engineer, from old steam pipe and fittings. The top or upper pipe is 2 1/2 inches in diameter and about 15 inches long; the middle length is three inches in diameter, 15 feet long; the bottom pipe is eight inches in diameter and ten feet long. This bottom pipe is sunk in the ground a distance of six feet. The rest of the construction can be understood by a glance at the sketch.



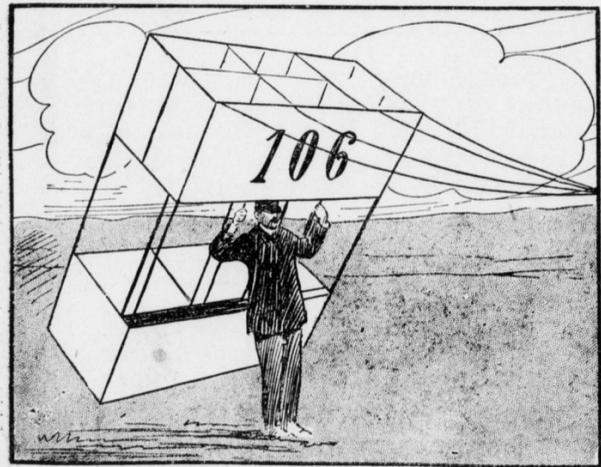
Fuzzled Pat.

Pat acknowledged himself puzzled. "They call it an indecent electric light," said he, "but it do beat me how they make the hairpin burn in the bottle."

Water Compression.

Water is compressed 1/326100 of its volume for each pound of pressure.

Kites for Army "Wireless"



Portable wireless outfits are considered part of the necessary engineering equipment to-day in all European armies. Under ordinary conditions, the exigencies of actual warfare will not allow the use of the permanent mast stations, says the Technical World Magazine.

Balloons and kites are therefore called into use to raise the aerial wire. When the breeze is light the tailless kite known as the Malay or Eddy is used. When the wind is blowing at 30 or 40 miles an hour the box kite is employed.

RAY OF LIGHT FOR WIRES.

Telephone Messages Transmitted Through Peculiar Medium.

It is now possible actually to reproduce a message from one point to another by means of a ray of light, reproducing at the end of the ray the

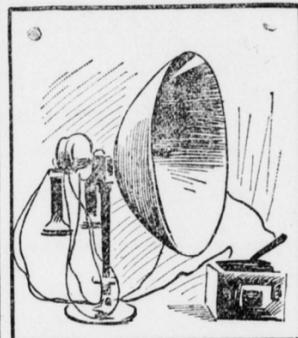


Transmitting Apparatus.

tones of the voice spoken into the ray at the sending end.

Numerous experiments have been made, and it has been found possible to combine a microphone with a powerful electric searchlight in such a way that the powerful current operating the searchlight is made subject to small fluctuations. It is as if a series of ripples was sent along the continuous band of lightwaves sent out by the powerful arc light.

At the other end of the shaft of light is fixed the polished mirror as shown in the photograph, in the center of which is a selenium cell. The



At the Receiving End.

fluctuations of light are concentrated by the concave mirror on the cell, and the little diaphragm attached to the receiver is operated by the fluctuating currents, and sounds reach the ear just as they do in the case of the ordinary telephone.

It is just as though one had spoken along the beam of light from a light-house tower and the speech had been heard at the other end of the ray about ten miles away.

TO FROST INCANDESCENT LAMP.

Piece of Emery Paper and Little Elbow Grease All That Is Necessary.

A small piece of good emery cloth is all the material necessary to frost an incandescent lamp quickly, but effectively. Rub the cloth over the entire lamp with a circular motion. Rubbing up and down will not produce the best results. About 15 minutes' work will produce a very good frosting on an ordinary globe.

Telephone from Moving Train.

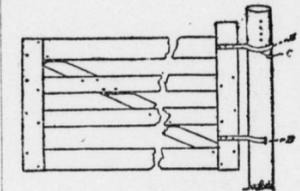
Telephone communication from a train running 35 miles an hour on a line out of Madison, Ind., was had with Louisville, Cincinnati and Indianapolis. The apparatus may prove to be sufficiently reliable to warrant the equipment of all trains. This would put the train crew in constant connection with the train dispatcher which would be a great advance in safety of operation.



DURABLE GATE.

Hinges for Gate Which Permit It to Be Raised on Low End.

Any ordinary gate will answer the purpose. The improvement is in the hinges. These are made of an ordinary wagon tire. The upper one, which I have marked A, is made so it will pass entirely around the post and is bolted to the end of the gate, writes the correspondent of the Journal of Agriculture. The bottom one, B, is made with a shoulder which extends only half way around the post. It is somewhat like a letter "Y," only



A Durable Gate.

the open fork is made round so it will fit the post.

A number of holes bored through the top of a post, one under the other, through any one of which a bolt may be placed. This bolt, C, holds the upper hinge in place. By setting it up or down in the row of holes, the gate may be made to swing high or low, as desired. When there is a heavy snow, the bolt can be placed in the top hole, and the gate will swing over the drift. If it is desired to raise the gate so hogs and sheep can pass under while large animals are restrained, the bolt can be set any height desired to make the passageway under the gate large enough to permit ingress or egress of the smaller animals.

The drawing will explain the construction.

THE DUST MULCH.

It Prevents Evaporation of Moisture and Causes Roots to Strike Deeper.

A Matter of much importance, both as regards saving moisture and preventing root injuries, is the depth of surface tillage. Too shallow cultivation will not be effective in checking evaporation, still one must know that the soil should not be stirred so deep that the top roots are cut. If this is done the growth is at once checked, and the roots are forced lower in search of supplies. From two to three inches have been found the best depth for flat cultivation, where the ground has been thoroughly prepared. When a seed bed has been thoroughly firmed, proper handling will bring the corn crop along, with the minimum amount of rainfall. The problem, says Indiana Farmer, is to maintain good capillary action between the lower water systems and the soil where the roots are growing. When the water moves upwards and strikes the dust blanket it is checked, and it must pass out through the plant, rather than by evaporation. It is a pretty nice problem, but the aim should be to make all water and fertilizing material pass through the roots of the growing plants, work for the dust mulch; don't dig down to the wet soil, so that with every cultivation you expose more soil to the sun.

MEDITATIONS.

Failure comes to the faint hearted.

Fear of being caught stands for conscience in some men.

Much of the fertility of American soils has been wasted by the men that have cultivated it.

No man should call himself a good farmer if his land has been growing less productive from year to year.

It is not safe to be governed by the results of a trial of one year on the farm, for frequently results are brought about by conditions which we know nothing about.

The most nutritious hay is made when grasses or clover are in bloom. A delay of one week in the cutting period will make a big difference in the actual feeding value of the crop.

With the prospect of a short hay crop, put away some sheaf oats, when harvest comes again. They make fine feed; in fact, if they are not put up before the straw becomes too ripe, there is nothing better.

Sheep Are Best Producers.

Prof. F. B. Mumford of the Missouri experiment station says that sheep produce more meat from a pound of grain than any other class of farm animals. In fact, a pound of mutton can be produced from about half as much grain as a pound of beef. Even Missouri's most-greivous hog requires more grain to produce a pound of human food than the sheep. With the combination of corn and clover hay for feed, the dry shed for shelter, sheep will always give good account of themselves and respond readily to the care given them.

Save the Lambs and Pigs.

Save the lambs; save the pigs. The ewes and sows will need some green food at this time, or at least some bran and oil meal. If the bowels are kept open and appetites good there won't be much trouble with the youngsters when they arrive.

ALMOST FELT ENVY PANGS.

Great Cricketer's Simple Tribute to His Own Worth.

In 1885 there was a great celebration in London in honor of Dr. Samuel Johnson, and among those in attendance was the Australian "crack" cricketer, Bonner, then at the height of his fame.

As one of the guests, says the compiler of the recently published "Letters" of the late Dr. George Birkbeck Hill, Bonner's health was proposed. His response was noteworthy.

"After seeing the way in which Dr. Johnson's memory is revered," he said, with great simplicity, "I am not sure that I would not rather have been such a man than have gained my own greatest triumphs in cricket."—Youth's Companion.

SORES AS BIG AS PENNIES.

Whole Head and Neck Covered—Hair All Came Out—Cured in Three Weeks by Cuticura.

"After having the measles my whole head and neck were covered with scaly sores about as large as a penny. They were just as thick as they could be. My hair all came out. I let the trouble run along, taking the doctor's blood remedies and rubbing on salve, but it did not seem to get any better. It stayed that way for about six months; then I got a set of the Cuticura Remedies, and in about a week I noticed a big difference, and in three weeks it was well entirely and I have not had the trouble any more, and as this was seven years ago, I consider myself cured. Mrs. Henry Porter, Albion, Neb., Aug. 25, 1906."

A Sad Mistake.

In my father's native village lives Mr. S., a very deaf old man. During the summer months he lets his spare rooms to some of the many pleasure-seekers who frequent the place, says a Boston Herald writer, and one day last summer, while Mr. S. was in his garden, a young man of the village chanced by, and the following conversation took place:

"Good morning, Mr. S."

"Maw'nin'."

"You've got your house full of boarders this summer."

Mr. S. was picking potato bugs off from his plants, but he managed to stop long enough to answer, "Yes."

"Some nice looking young ladies among them," continued the young man.

Mr. S. stood up and eyed the potatoes critically, then answered:

"Well, they'd ought to look purty good. I just picked two quarts of bugs off 'em."

Bill Nye's Long Wait.

Bill Nye when a young man once made an engagement with a lady friend of his to take her driving on a Sunday afternoon. The appointed day came, but at the livery stable all the horses were taken out save one old, shaky, exceedingly bony horse.

Mr. Nye hired the nag and drove to his friend's residence. The lady let him wait nearly an hour before she was ready, and then on viewing the disreputable outfit flatly refused to accompany Mr. Nye.

"Why," she exclaimed, sneeringly, "that horse may die of age any moment."

"Madame," Mr. Nye replied, "when I arrived that horse was a prancing young steed."—Harper's Weekly.

Hard to Realize.

"Mother," said a college student who had brought his chum home for the holidays, "permit me to present my friend, Mr. Specknoodle."

His mother, who was a little hard of hearing, placed her hand to her ear.

"I'm sorry, George, but I didn't quite catch your friend's name. You'll have to speak a little louder, I'm afraid."

"I say, mother," shouted George, "I want to present Mr. Specknoodle."

"I'm sorry, George, but Mr. — What was the name again?"

"Mr. Specknoodle!" George fairly yelled.

The old lady shook her head sadly. "I'm sorry, George, but I'm afraid it's no use. It sounds just like Specknoodle to me."—Everybody's Magazine.

CHILDREN SHOWED IT

Effect of Their Warm Drink in the Morning.

"A year ago I was a wreck from coffee drinking and was on the point of giving up my position in the school room because of nervousness. I was telling a friend about it and she said, 'We drink nothing at meal time but Postum Food Coffee, and it is such a comfort to have something we can enjoy drinking with the children.' I was astonished that she would allow the children to drink any kind of coffee, but she said Postum was the most healthful drink in the world for children as well as for older ones, and that the condition of both the children and adults showed that to be a fact.

"My first trial was a failure. The cook boiled it four or five minutes and it tasted so flat that I was in despair but determined to give it one more trial. This time we followed the directions and boiled it fifteen minutes after the boiling began. It was a decided success and I was completely won by its rich delicious flavour. In a short time I noticed a decided improvement in my condition and kept growing better and better month after month, until now I am perfectly healthy, and do my work in the school room with ease and pleasure. I would not return to the nerve-destroying regular coffee for any money."

"There's a Reason." Read the famous little "Health Classic," "The Road to Wellville" in pkgs.

SPECIAL TRAINS.

National Editorial Association and Christian Endeavor Conventions.

Personally conducted special trains via the Chicago, Union Pacific & North-Western Line leave early in July for the Pacific Coast. Special all-expense tours at very low rates for round trip, including sleeping car accommodations, meals, etc. All the advantages of a delightful and carefully arranged tour in congenial company. Write for itineraries and full particulars. S. A. Hutchison, Manager Tourist Department, 212 Clark Street, Chicago.

English Imports of Grain.

It would take 10,500,000 acres to produce the amount of grain which England yearly imports from abroad.

Improved Farms Within 50 Miles of St. Paul. Cheap and desirable for homes. 50% profit for investment. Write us. Evans Real Estate Co., St. Paul, Minn.

Australia, although in area 26 times as large as the whole of the British Indies, has a population smaller than that of London.

Don't Sneeze Your Head Off. Krause's Cold Capsules will cure you almost instantly. At all Druggists, 25c.

Invention is the mother of trusts and promotion is the stepfather.

Mrs. Winslow's Soothing Syrup. For children teething, softens the gums, reduces inflammation, always cures wind colic. 25c a bottle.

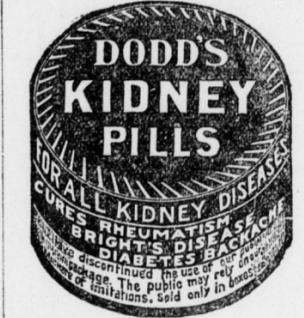
Build your hopes high—then stand from under.

Catarrh Cannot Be Cured

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quick medicine. It is prescribed by one of the best physicians in this country for years and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing catarrh. Send for testimonials, free. F. J. CHENEY & CO., Props., Toledo, Ohio. Sold by Druggists, price 75c. Take Hall's Family Pills for constipation.

An Ill Wind, Etc.

"Her marriage was very unfortunate, wasn't it?" "Oh, no; she considers it quite fortunate." "Why, I understand she was divorced." "Exactly, and her divorce was the opening of her stage career, which is now very promising."



Patents Watson E. Coleman, Patent Attorney. Terms low. Highest ref.

A. N. K.—C (1907—23) 2181.

MOTHERHOOD

The first requisite of a good mother is good health, and the experience of maternity should not be approached without careful physical preparation, as a woman who is in good physical condition transmits to her children the blessings of a good constitution.

Preparation for healthy maternity is accomplished by Lydia E. Pinkham's Vegetable Compound, which is made from native roots and herbs, more successfully than by any other medicine because it gives tone and strength to the entire feminine organism, curing displacements, ulceration and inflammation, and the result is less suffering and more children healthy at birth. For more than thirty years

Lydia E. Pinkham's Vegetable Compound

has been the standby of American mothers in preparing for childbirth. Note what Mrs. James Chester of 427 W. 35th St., New York says in this letter:—Dear Mrs. Pinkham:—"I wish every expectant mother knew about Lydia E. Pinkham's Vegetable Compound. A neighbor who had learned of its great value at this trying period of a woman's life urged me to try it and I did so, and I cannot say enough in regard to the good it did me. I recovered quickly and am in the best of health now."

Lydia E. Pinkham's Vegetable Compound is certainly a successful remedy for the peculiar weaknesses and ailments of women. It has cured almost every form of Female Complaints, Dragging Sensations, Weak Back, Falling and Displacements, Inflammation, Ulcerations and Organic Diseases of Women and is invaluable in preparing for Childbirth and during the Change of Life.

Mrs. Pinkham's Standing Invitation to Women

Women suffering from any form of female weakness are invited to write Mrs. Pinkham, at Lynn, Mass. Her advice is free.

Libby's Food Products

Libby's Veal Loaf With Beef and Pork

Do you like Veal Loaf? You will surely be delighted with Libby's kind, made from choice fresh meats, in Libby's spotless kitchens. It is pure, wholesome and delicious in flavor.

Ready for Serving at Once.—Simply garnished with sauce it is an appetizing entrée for luncheon or dinner.

Ask your grocer for Libby's, and insist upon getting Libby's.

Libby, McNeill & Libby Chicago

SICK HEADACHE

CARTER'S LITTLE LIVER PILLS.

Positively cured by these Little Pills. They also relieve Distress from Dyspepsia, Indigestion and Too Hearty Eating. A perfect remedy for Dizziness, Nausea, Drowsiness, Bad Taste in the Mouth, Coated Tongue, Pain in the Side, TORPID LIVER. They regulate the Bowels. Purely Vegetable.

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CURES ALL ACHES And Nervousness Trial bottle 10c At drug stores

A Positive CURE FOR CATARRH

Ely's Cream Balm is quickly absorbed. Gives Relief at Once. 50c. Ely Bros., 66 Warren St., N. Y.

NEW WHEAT LANDS IN THE CANADIAN WEST

560 ACRES 5,000 additional miles of railway this year have opened up a largely increased territory to the progressive farmers of Western Canada and the Government of the Dominion continues to give ONE HUNDRED AND SIXTY ACRES FREE to every settler.

THE COUNTRY HAS NO SUPERIOR

Coal, wood and water in abundance; churches and schools convenient; market easy of access; taxes low; climate the best in the northern temperate zone. Law and order prevail everywhere.

For advice and information address the SUPERINTENDENT OF LANDS, OTTAWA, CANADA, or any authorized Canadian Government Agent.

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FREE PAXTINE

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It cleanses and heals mucous membrane infections, such as nasal catarrh, pelvic catarrh and inflammation caused by feminine ills; sore eyes, sore throat and mouth, by direct local treatment. Its curative power over these troubles is extraordinary and gives immediate relief. Thousands of women are using and recommending it every day. 50 cents at druggists or by mail. Remember, however, IT COSTS YOU NOTHING TO TRY IT. THE R. PAXTON CO., Boston, Mass.

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