

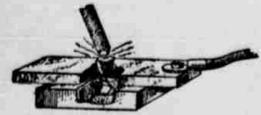
# THE ELECTRICAL WORLD



## USE ELECTRICITY IN CASTING

Owing to Great Amount of Heat Developed Arc Has Been Adapted for Numerous Devices.

Owing to the great amount of heat that is developed in any form of the electric arc, it has been commercially adapted for a number of devices where excessive heat is necessary. In cutting metals, in manufacturing silicon and such products, it is found invaluable, writes G. Werts in the Scientific American. A method is suggested below for making small casts in which the electric arc is used as the heat source. Casts in brass, zinc, aluminum, silver, gold, etc., can be



Making Cast With Electric Arc.

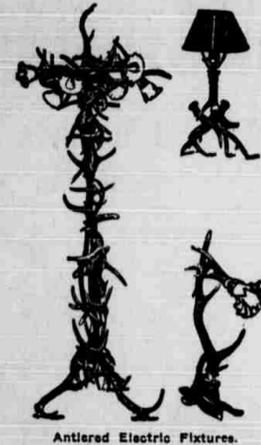
made. Preparations for the casting should be made in the ordinary manner. Form the mold of sand or plaster as advisable, and then over the pour holes place a tablet or slab of carbon about 1/4 inch thick. This should have a round tapering hole, the small end of which opens above the pour hole of the mold. A terminal should be bolted to one side of the carbon slab and lead to the current source through a series of heavy resistances. The carbon slab comprises one electrode of the arc, the other being a 1/4 inch hard wood carbon fitted with a fiber or wood handle.

A small block of the metal to be melted is placed in the depression of the carbon surface, and touched by the other electrode to form an arc. The metal will flow into the mold quickly, dependent on the amount of current supplied to the arc. Casts obtained by this method are very smooth and regular. It is necessary to wear a hood fitted with dense blue lenses, or the fumes and dazzling light will prove detrimental to the operator's lungs and eyesight.

## ANTLERS AS LIGHT FIXTURES

Enthusiastic Sportsman is Pleased at Sight of Trophies of the Hunt—Made in Germany.

To the enthusiastic sportsman the sight of antlers or other trophies of the hunt is always a source of pleasure as it recalls so many enjoyable days and events. The conventional



Antlered Electric Fixtures.

electric lighting fixtures with their polished brass or oxidized copper tubes and balls may be more true to the canons of art, but the lover of outdoor sport gets only a tame sort of satisfaction from them, says the Popular Electricity. To him the rustic intermingling of horns and antlers makes for by the stronger appeal. One German firm is catering to this taste by offering a whole line of antlered fixtures to please the huntsman.

## EDISON MADE ELECTRIC BUG

Curious Little Invention Overcame Difficulty of Getting Wires Through Long Pipes.

Edison, the inventor, has been well called a wizard, and one of his most astonishing inventions was an electric bug. He conceived a plan to put electric wires in gas-pipes, and the only difficulty was to get the wires through the pipes.

After studying the matter, Edison said to a fellow electrician: "I believe I can make a bug that will drag a wire through every foot of pipe in New York city, if it becomes necessary."

"Make a bug!" exclaimed his companion, thinking the inventor had lost his mind. "What in the world do you mean?"

"Well, I'll make a bug," said the inventor, confidently, "that will go where I send him, and drag a wire, too."

A few days afterward, he laid a curiously constructed thing on a table in the office, before time to go to work.

It was his gas-pipe bug. It was constructed thus: A minute electro-magnet, carrying behind it a fine, insulated wire pawl. Now, observe—every time the circuit was closed through the magnet the armature was attracted, the pawl clutched the sides of a piece of gas-pipe provided for the occasion, and the magnet behind was drawn toward the armature about the sixteenth of an inch. When the circuit was opened, the armature reached forward ready to take a second step. Thus at every closing of the circuit the little bug advanced one step, dragging the wire behind it.

## TRY ELECTRICITY ON SHEEP

Ewes Pastured Under Power Wires of Big Electrical Plant Produce More Lambs and Wool.

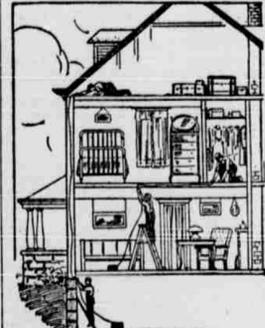
Prof. S. Wentworth, having an experimental farm near Roseville, Cal., has been subjecting both vegetation and farm animals to the influences of electric currents, declaring that his experience already has proved astounding. For example, he reports upon a flock of 2,000 sheep, divided into two flocks of 1,000 each. One of these flocks pastured beneath the power wires of a big electrical plant, while the other flock was far removed. Under electrical influences he reports that the ewes averaged two lambs each, while the ewes in the other flock bore an average of less than one lamb. Also he reports the yield of wool 30 per cent. greater than in the flock removed from the electrical currents. The conducting wires are of high voltage, and their effect upon a crop of wheat sown under them is anticipated at 100 per cent. increase above other fields.

## FOR WIRING OLD BUILDINGS

By Use of Thin Steel Tape, Called "Snake" Electric Wires May Be Easily Installed.

Wiring old houses for electric lights does not demand the marring of woodwork and tearing up of floors, walls and ceilings. Instead, the electrician may enter the average house and wire it completely without causing near the trouble and dirt that painters, paper hangers, and carpenters are responsible for.

It is done by a clever system of "snaking" wires up and down through the walls by means of a thin steel tape called a "snake." The wires usually enter a house through the basement. One electrician will prob-



The "Snake" at Work.

ably take up a single board from the attic floor near the wall. Then he will insert the "snake" and wiggle it up and down until it finds a clear drop to the basement, where it will be caught by a second electrician, who will tie the wires to it and signal for them to be pulled up. In exactly the same manner, other wires are fished up and down the walls and under the floors to the little holes in the plaster where the fixtures are to be located. Sometimes it becomes necessary to remove a section of baseboard to fish the wires under hardwood floors to the fixture holes in the ceilings, or to take up a section of floor in a closet, but the "snake" always accomplishes its task.

## Prescribing by Wireless

A novel proof of the value of wireless telegraphy at sea has lately been reported. The captain of a tramp steamer in the Gulf of Mexico was taken ill with typhoid poisoning. With death staring him in the face on account of inadequate medical aid he decided to call, by wireless, for assistance from the physicians at a naval station ten miles distant. A liner 700 miles farther away heard the wireless call and the ship's surgeon made haste to reply with the necessary prescription, which was then filled from the tramp steamer's medicine chest.

## Reliable Wireless Call

One of the principal drawbacks of wireless telegraphy is the fact that no very efficient call system has been invented which will serve to call an operator who is not in direct attendance upon the instrument. According to press dispatches, when the Wellman ship sighted the steamship "Trent," it was impossible to call the vessel by means of wireless telegraphy because the operator was not at his post. Instead of that, light signals had to be used, and it was not until the "Trent" had been notified by means of signal lamps that the "America" was equipped with wireless apparatus, that wireless communication could be established. Had there been a fog at the time, wireless call for help on the part of the crippled steamer would have received no response.

## ELECTRICAL NOTES

There are more than 1,000,000,000 calls a year over the telephones of New York.

An incandescent electric lamp of 442 candle power has been designed for lighting public places.

An electrical dredge on the Yukon river has a capacity of ten thousand cubic yards of earth a day.

In a general and electrical engineering factories in the United Kingdom over 16,000 women are employed.

In a new English incandescent gas light a cluster of rods replaces the more familiar and more fragile mantle.

A complete wireless system is to be installed right away between Harbin, Manchuria, and St. Petersburg, Russia.

A novel electrical stove for use on dining tables is provided with a drawer beneath the heating coil so that toast can be made at the same time something else is being cooked on top of the stove.

# NEW NEWS OF YESTERDAY

By E. J. Edwards

## Mahone Needed No Sympathy

How the Eccentric but Spirited Little Senator From Virginia Repelled the Attack of Democrats Led by Benjamin H. Hill.

When Gen. William Mahone entered the United States senate from Virginia in March, 1881, he was already nationally famous as "the Hero of the Crater," a title which he gained by his bravery as a Confederate general in the fighting that took place in and around Petersburg in the late winter of 1865.

General Mahone was sent to the senate by the faction of the Virginia Democracy known as the readjusters, who favored a partial or conditional repudiation of the state debt. But coincident with the beginning of his term as senator he allied himself with the Republicans and was assigned a seat in the rear row upon the Republican side of the chamber.

He was an animated skeleton; a little over medium height, there seemed to be not an ounce of spare flesh upon his body. He had a bushy head of hair, large, dark eyes and a voice that was thin and piping, but nevertheless clear. And certain peculiarities of dress accentuated his physical appearance. His shirt front was a lace fill and no man could exactly describe the kind of a collar which he wore. It seemed to be a combination of lace, turnover and old-fashioned stock. Instead of cuffs his wrists were covered with delicate draperies of lace. He wore a waistcoat of peculiar make, double breasted, and drawn in tightly at the waist. His trousers seemed to be gathered at the waist, then swelling until they were of a balloon-like formation at the knees, they tapered down to a very tight adjustment at the ankles. His coat was a sort of mixture of the military frock and the civilian frock coat. He always wore a military soft felt hat.

Angered by his allegiance with the Republicans, some of the senators upon the Democratic side, especially those from the south, decided to make attacks upon Mahone soon after he had entered the senate. Senator Benjamin H. Hill of Georgia was chosen to lead the assault. Hill possessed a voice that seemed to sound the diapason of human vocal utterance. In his features and in the manner in which he wore his hair, he reminded

everyone of the familiar portraits of John C. Calhoun. He was a man of dauntless courage, and he it was who told General Lee that if the south established independence Lee would be the successor of Jefferson Davis as president of the Confederacy.

The day came for the forensic battle between Hill and Mahone. The galleries were crowded. Every senator who was in Washington was in his place.

Senator Hill began the attack and it was a fierce, although entirely parliamentary onslaught. He intimated that Mahone was betraying the party with which he had always been allied, was faithless to the interests of the south and had been lured by unworthy ambition.

When Mahone began to reply he advanced down the aisle until he stood directly facing Senator Hill. His was the most extraordinary personality ever seen upon the floor of the senate. In spite of themselves senators could not help smiling at the eccentricity of that personality. But they forgot their smiles when, shaking an attenuated and bony finger, to the accompaniment of the waving lace that surrounded his wrist, Mahone, instead of defending himself, made vigorous counterattack upon Hill.

Late that afternoon Senator Mahone, with Senator John P. Jones of Nevada, reached his hotel in Wash-

ington General Mahone found his little daughter, who was about twelve years of age, waiting him in the parlor. The child was plainly frightened. She had heard that there had been a desperate battle in the senate between her father and Senator Hill. She rushed to her father, overjoyed to find him safe. Then her fear came back to her. "Papa," she asked, anxiously, "the papers say that Mr. Hill and some other senators are bound to destroy you. What are you going to do?"

"Well, you can ask Senator Jones, who has come home with me," Senator Mahone replied soothingly, as he held the child in his arms. "He tells me that I waltzed over to the southern side of the senate and couldn't find a partner, so I had to do my dancing all alone. And I did."

"But what are you going to do, papa, if they attack you again?" the little girl asked, tremulously.

Senator Mahone cuddled his daughter to his breast. He smiled tenderly. Then he answered:

"Well, in the army, I always knew how to take care of myself and my command in the face of the enemy, and I tell you now, my little girl, that your papa will know how to take care of himself in the senate. Now, run and get ready for dinner."

Comforted by his words, the child went happily away. But her father never had an opportunity to take care of himself, for not again was he attacked.

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## Mrs. Stowe Helped Florida

She Was the First Northern Person to Draw World-Wide Attention to That State's Magnificent Climate and Opportunities.

In the mid-spring of 1883, I was a passenger upon a steambot scheduled to run from Jacksonville, Fla., up the St. John's river to Stanford, located at the end of steamboat navigation on the river. To make the trip required a journey lasting from about seven o'clock in the evening until noon the next day. Among the passengers were

E. K. Foster, Jr., son of a distinguished lawyer of New Haven, Conn., who was in his early life a very prominent Republican and a warm personal friend of Abraham Lincoln's. E. K. Foster, Jr., was one of the pioneers, so to speak, who went from the north to Florida soon after the close of the Civil war. He foresaw the possibilities of Florida as an orange producing state and had made a venture in an orange plantation.

Around Mr. Foster, on the steamer's deck, collected a number of the passengers, who were much interested as he pointed out various orange groves that lined the banks of the river, told of their ownership and spoke of some of the difficulties which the early development of the orange growing business in Florida had met with.

"But the most interesting by far of the orange groves upon the river," Mr. Foster said, "is one that is located near Mandarin. I never see it without thinking of the extraordinary significance associated with its ownership. It is the grove that was bought by Harriet Beecher Stowe. Within it stands her winter home, or did as long ago as her health and that of her husband, Professor Stowe, permitted them to make the journey every winter from New England to Florida.

"The special significance to which I refer lies in the fact that Mrs. Stowe was really the first person of the north to fix the attention of the north upon the magnificent winter climate of Florida and the opportunities that were opening to that state to engage in successful rivalry with the West Indies and with Italy for command of the market in the United States for oranges.

"When it became known that Mrs. Stowe had bought this orange grove, many persons in the north said that she would be likely to suffer a good deal in the way of social ostracism and by various other manifestations which would show that in the south she was looked upon as one of the fomenters of the Civil war through the publication of 'Uncle Tom's Cabin.' Mrs. Stowe, however, had not the slightest apprehension on this score. She said she knew the people of the south, was conscious of the fact that they were warm-hearted, generous and broad-minded, and so felt no anxiety.

"She met with exactly the reception she expected. She was welcomed by the people of Florida. She was treated with respect, and after a while there was general acknowledgment of the fact that by coming to Florida, by thus calling attention to the possibilities of the state as an orange growing community, she turned the tide in the state from the ebb of despair and demoralization towards the flood of prosperity which within a few years came to it.

"But it is a little singular, isn't it, that Harriet Beecher Stowe, the author of 'Uncle Tom's Cabin,' should have been the one person in all the United States to do that?"

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## Kick Stops Indian Rising

First Part of Fighting Skunk's Name Is Dropped When He Is Bested by Ranchman.

Coincident with the recent discovery by a university professor of a tribe of wild Indians in the Deer Creek canyon, a few miles north of Chico, Calif., comes the report of how R. J. West, a middle-aged rancher, the other day put the "quietus," single-handed, to an uprising among these same red men.

Fighting Skunk, the agitator, had been parading about in his war paint day and night, heavily armed, trying by oratory to arouse his fellows to his own state of excitement. Meeting with little support, he engaged in noisy war dances all by himself, declaring that he would clean out the white invaders unaided.

West sneaked up on the savage, felled him with a blow in the jaw and, after helping himself to the Indian's weapons administered a series of

swift follow-up kicks, the last one of which lifted the howling warrior over a high bank into a deep pool of water.

Then West went home, taking the red's fighting apparatus with him. Now the Indians have dropped the first part of Fighting Skunk's name in addressing him and no further war talk is heard from him.

## A Melancholy Interest.

"Are you related to the bride or groom-elect?" inquired the busy usher.

"No."

"Then what interest have you in the ceremony?"

"I'm the defeated candidate."

"Old Men for Counsel, Young Men for War."

The glory of young men is their strength; and the beauty of old men is the hoary head.—Proverbs of Solomon, xx:29.

# For the Hostess

## A Novel Book Party.

I wonder if you would not enjoy "book charades?" They do not need rehearsing and are loads of fun. Just prepare cards with the numbers you wish to have, and let them write down the ones they guess. I append a few suggestions which you can add to. For a prize give a book candy box filled with bonbons or salted nuts.

"Looking Backward"—A girl walks across the stage with her head turned over her shoulder.

"The First Violin"—Someone holds up a violin on which the No. 1 cut from white paper, has been pasted.

"We Two"—A man and a girl walk across the stage arm in arm.

"The Brass Band"—A girl walks forward, carrying a brass bowl.

"Lavender and Old Lace" is represented by a girl dressed in lavender gown trimmed with old lace.

"Madame Chrysanthemum"—A girl in a Japanese kimono, holding chrysanthemums.

"When a Man Marries"—A man and a girl walk across the stage, while someone plays the wedding march.

"The Light That Failed"—One girl carries a lighted candle which another girl blows out.

"The Gentleman From Indiana"—A man carrying a suit case which is conspicuously labeled "John Jones, Indiana."

"Vanity Fair"—A girl gazing into a looking-glass.

"A Study in Scarlet"—A girl seated in reverse, wearing a scarlet dress.

"The Bow of Orange Ribbon"—A girl or a man wearing a huge bow of orange ribbon.

"The Woman in the White Veil"—A girl wearing a big white automobile veil.

"Old Gentleman in the Black Stock"—A man with powdered hair and cane, with a big old-fashioned black stock.

"Old Rose and Silver"—A girl dressed in old rose trimmed with silver.

"The Lady With the Red Fan"—A girl with a big red fan, with which she languidly fans herself.

"A Certain Man"—A man wearing a tag which says in big letters "John D."

"From Sea to Sea"—Two huge letter C's are cut from white paper and pinned to the curtain on each side of the stage and the players walk from one to the other.

"The Ascent of Man"—A man climbs gravely to the top of a stepladder and remains seated there.

Pope's "Essay on Man," "The Under Side of Things," by Lillian Bell; "Innocents Abroad," "Black Rock," by Conner; "Under Two Flags," "Middlemarch," "Wandering Jew," "Man of the Hour" and "The Virginian."

Two Party Schemes.

The hostess called this successful affair a "pie" party.

When all had arrived the men were auctioned off by the host, who was gifted with a ready flow of language, and he had a keen sense of humor. The "medicine" man was introduced on the block in this manner: "A man who was often sought, although he was known to be addicted to 'ill company.'" The bidding was fast and furious and it took all the ready money of the purchaser to get him. The coal dealer was described as "The man we think of when the snow flies." When all the ladies had secured their partners they were given pieces of pie made from paper pie plates such as bakers use, the edges fastened together with red baby ribbon. On being opened there were slips of paper with the words "mince," "cherry" or "apple." Whatever recipe was called for the man was to give it, while the "girl" made the pie in pantomime. This called forth merry peals of laughter. The refreshments consisted of individual pies, coffee and sandwiches. The man who gave the best recipe was the recipient of a pie-shaped box of sweetmeats.

This "portrait" party scheme is good: Get common wrapping paper, a light brown or white, and cut into squares a foot and a half each way. Put up a sheet across the door and have the light from a lamp arranged

so that the shadow of a person's head will be reflected on the square of paper. A guest is to be placed sideways so that the outline of the face will show on the paper. With a heavy pencil or a crayon draw the outline or profile. One guest at a time is brought into the gallery; the name is put on the back of the portrait. When all have been taken, an assistant helps cut out the silhouettes, which are pasted on black paper and pinned up like a portrait exhibition. The guests are provided with pencils and papers and write down who they think is who. A prize is provided for the one who guesses the most correctly, and, if the hostess wishes, a consolatory prize may be awarded.

A "Bacon Bat."

A young college friend informed me that the very latest thing in outdoor affairs was "A Bacon Bat." When explained I concluded that it must be loads of fun. Of course, as with all such parties, all depends upon the guests and their love of outdoor functions. We all feel the "call of the wild" these glorious days and I am sure many of our readers will want to have a "Bacon Bat" just as soon as they read this. Six couples are enough, provide plenty of delicious bacon sliced very thin, sweet potatoes and several dozen finger rolls; these are the absolute requirements, other things may be added at the pleasure of the hostess. Build a fire, roast the sweet potatoes (or take a frying pan, have the potatoes boiled at home and fry them over the coal). Grill the bacon on the ends of long sticks, insert the finger rolls and you have a meal fit for a king. Coffee may be made and I assure you the only danger is in not having enough of everything. Nature study classes are in favor all over the country, and after a tramp what could be more appetizing than the repast I have just described? I would suggest roasting Irish potatoes and taking a jar of butter with plenty of tissue paper napkins; hard boiled eggs are a welcome addition with a jar of tiny cucumber pickles and olives both ripe and green.

MADAME MERRILL.

## For the Blouse.

For dainty silk dress or chiffon waists use instead of ordinary buttons brass rings of the proper size, buttonholed over in silk of a color to match the fabric or the trimmings. In white thread this is very nice for a lingerie blouse also and easier to make than crocheted buttons. If you wish you may darn across the rings, or cross threads and buttonholes over them; but really the plain buttonholed rings are just as pretty. Where you have crocheted loops instead of buttonholes the soft button rings will do as well, and can be bought ready made at any embroidery supply or notion store.

Shirt Waists.

Waists of challis, foulard, pongee or messaline matching the suit in color are very good looking, and are more practical in many ways than washing shirt waists and in the end hardly more expensive. They can be made very simply and worn with lingerie collar and cuff sets.

To Clean Silver Chains.

Also mesh bags and purses, whether of sterling or German silver, fill a shallow pint dish with gasoline and dip in the article, using a soft nail brush to scrub. Change gasoline often until it looks clear, then polish the pieces vigorously with chamolite.—Woman's Home Companion.

## Summer Bags



THE bags shown are made of linen or plique buttoned down with pearl buttons and braided or embroidered. They have convenient pockets inside and long cotton cords suspend them on the arm. For the summer dress they are quite the ideal

article. No smudges from the leather of one's handbag and the lightness of them counts, too.

The belt is stitched linen with pearl button effect. These are really snags which keep the belt fastened neatly and simply.

## FANCIES OF FASHION

Everywhere is seen a bit of black satin.

Natural feather quills are seen in plaid and amber colors.

The newest sailor collars are deep in the neck and hardly existing in front.

The red, white and blue of the revolution will be worn singly and in combination.

Pringes are seen on many of the new lingerie gowns as girle and tunic trimming.

A good deal of heavy embroidery and Irish crochet lace appear on the new waists.

One of the newest sleeves is about three-quarter length and is as wide at the bottom as at the plain top.

In Paris waistcoats with huge revers to turn back over the outside coat are in vogue and have plain short backs of lining material, so that the waist coat may be worn with separate coats if desired.

The note of red, cerise, French blue or emerald green is very often introduced into the black and white frock and bits of Persian or Russian figured silk or embroidery are also used as trimmings; but some of the best looking trotting frocks in the black and white are entirely without color relief, the color note being left to the hat, parasol, etc., used with the frock.

Empire Dress Bidding for Favor.

The empire dress, with waistband just little below the arms, is bidding for favor this season and the yoke dress is always popular for very little girls. Kimono sleeves, short and loose, are used in some of the tiny girls' frocks, usually of a dressy character, but they are the exception.

The skirts are plaited or fulled and no narrower than they used to be.

Patent leather belts are as much worn as ever with the Russian frocks, but wide, soft belts of black velvet are shown in some shops catering to children.

For cool days the Russian, sailor or middy suit of white or blue serge is in order, and the sailor and the middy in linen are as popular as ever for girls over five.