



WATER HEATER FOR POCKET

Harnessed to an Electric Fixture, It Quickly Does Its Work—Boils Water in Four Minutes.

Heretofore it has always been supposed that some kind of a stove was required to heat water, even if only a stove the size of your hand. An Ohio genius, however, has demonstrated that this is not so by devising an electric water heater. A little metal cylinder has a cord



Pocket Heater in Action.

which can be fastened to an ordinary electric light socket. The current is then turned on and the cylinder is placed in the water. The receptacle containing the liquid must be brought to the heater, as the latter cannot be moved further than the length of the cord. The heater will produce hot water in two minutes and boiling water in four minutes. It is useful to heat water for shaving and as a sterilizer. It is just what is required. At the same time it does not charge the water and may be handled without fear of contact with the current.

USE ELECTRIC CEILING FANS

Being Given Interesting Test by Mobile (Ala.) Merchants to Keep Out Harmful Flies.

Electric ceiling fans as substitutes for screen doors are being given an interesting test by several business houses in Mobile, Ala. The fans are installed over the doorways on the outside and the draft created is said to effectually prevent flies from entering, says the Popular Mechanic.

The idea was first tried over the entrance of a store located next to a restaurant, the flies from which were most persistent and annoying in getting past the screen doors. Since the fan has been installed, it is claimed



Keeps Out Flies.

that not a fly passed through the entrance, although the six-foot doorway is wide open and customers are continually passing in and out.

Strength in Filament.
When it was first put before the public, the filament of the tungsten lamp was so delicate that it would be often shattered by careless handling, and it was impossible to place them where they were subject to vibration, for the life of a lamp under such circumstances was necessarily short. The improvements made in the manufacture of filaments of this character have been very rapid, and at a recent electrical show all sorts of stunts were done with the tiny filament for use in the lamp. Heavy pieces of furniture were suspended by one of these thread-like cords, and they were subjected to other tests of this character and equally severe. It is claimed that a wire of tungsten may now be made with from three to five times the strength of that of the best steel, and has shown a strength of 500 pounds to the square inch.

ELECTRICAL NOTES

The average length of a moving picture film is 1,000 feet.

The telephone rate in Denmark outside of the larger cities is about \$11 a year.

Experiments abroad demonstrate that electricity stimulates plant growth.

During the past year 1,200,000 miles of telegraph wire were added to that already standing.

A man in East India has invented an electric pen that carbonizes the sheet of paper over which it passes.

A portable electric lamp useful to miners or other persons who have to work in the dark has been patented by a New York man.

Many British business men are of the opinion that England would have a better telephone service if it were out of the government's hands.

The filament in the new Edison tungsten lamps is only half the diameter of a human hair and is as strong, in proportion, as steel piano wire.

The new electric restaurant toaster will operate at a cost of ten cents a day, 60 per cent. cheaper than gas, and will toast 250 orders a day.

In 1909 the telegraph and telephone companies, together with similar concerns that use electric wires in this country, expended over \$7,000,000 in the purchase of poles.

PRACTICAL USE OF CURRENT

Wooden Bridge Dismantled by Use of Electrically Heated Wires to Save Piers and Abutments.

An interesting use of electricity was recently demonstrated in England, where a wooden bridge was cut down by means of electrically heated wires. The bridge had been condemned, and was to be replaced by a steel structure supported on the old masonry piers and abutments.

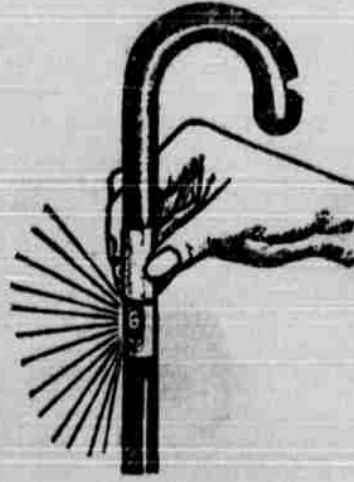
Three weeks was allowed in which to dismantle the woodwork, but, says the Scientific American, it proved impossible to accomplish the work in so short a time without the use of dynamite or fire, which undoubtedly would have injured the masonry. Finally an electrician proposed to destroy the bridge by the use of electricity. Each span of the bridge contained 27 planks, and it was proposed to cut them so that they would drop into the water simultaneously, clear of the piers. The structure was wired and sufficient current was employed to bring the wires a cherry red. An hour and forty minutes after the current was applied the first span was cut and fell into the water.

The operation was begun at five o'clock in the morning, and at two o'clock the next morning the structure had been demolished without injuring the masonry.

ELECTRIC LIGHT IN A CANE

Takes Place of Pocket Flashlight and Does Not Draw Current Out of Shape—Easily Worked.

Carrying a pocket flashlight has one drawback for the fastidious dresser; it may in time draw the pocket out of shape, besides always bulging it out, says the Popular Electricity. For such a man the cane form solves the prob-



An Electric Light Cane.

lem, consisting as it does of a cane with a slender flashlight inserted near the handle. By sliding or turning a metal sleeve as shown in the illustration, the current is turned on and the miniature lamp sheds its beams on the way or on the keyhole.

WORK WIRELESS UNDER SEA

French Boats, Seven Miles Apart, Transmit Submarine Messages—Apparatus on All Vessels.

Interesting experiments have been carried out with submarine and wireless telegraphy by the submarine flotilla at Cherbourg. By means of submarine bells messages were conveyed quite distinctly to the battleship Bouvines by four submarines, each at a distance of seven miles. As a result of this experiment the minister of marine has given instructions that all submarines shall be provided with these bells.

The submersible Prantal was also successful in signaling to the Bouvines by wireless telegraphy, all the vessels met by her between St. Waast, Cape de la Hague and Cherbourg, and announcing her arrival in sight of the forts of Cherbourg. French submarines will in future be provided with wireless telegraphy apparatus.

Tungsten Lamps Lead.

A recently published table of results of a test for best maintained candle-power of various illuminants shows tungsten lamps at the head with 94 per cent average of initial candle-power on 1,000 hours of burning; the magnetic arc is next with 50 per cent; enclosed carbon arc and mercury vapor alternating current arc are next with 78 and 75 per cent respectively. Illuminants other than electric run below 70 per cent.



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New News of Yesterday

By E. J. EDWARDS

Camp's Ungratified Desire

Former Manager of the New York Clearing House Had Consuming Ambition to Find One Day's Exchanges Exactly Balance.

One of the most famous managers in the history of the world's largest clearing house association—that of New York city—was the late William A. Camp. He held that position for nearly a quarter of a century, and in that time he carried the clearing house through two famous panics—those of 1873 and 1893—and several lesser financial disturbances. No financial history of the country of the period from 1870 to 1894 would be complete without paying considerable attention to the activities of Mr. Camp as manager of the New York Clearing House association and the work of that institution under his management.

Recently I told of the improvised institution of research which Mr. Camp, as manager of the clearing house, conducted to test the mind's ability to count without external aid. Mr. Camp was a man of delightful whims, and this was one of them. But there was yet another whim which had even greater hold of him. It became, in fact, the great consuming ambition of his life as manager of the clearing house.

"This institution," he said to me one day, "is established for the purpose of making it possible to exchange easily the checks and drafts which the banks that are members of the association have received upon deposit or which are drawn against these banks. Every bank comes here at a certain hour of the day with checks or drafts, which they call 'items,' that have been received upon deposit within 24 hours. Then the clerks go around presenting the drafts to representatives of each bank. In that way the exchanges are effected, for every bank is credited with the drafts which it has presented for collection and is charged with the items presented to it for collection. Then, if there be any balance, the bank must pay it in to the clearing house, which settles with each bank. With this explanation in mind, you will understand the nature of the wish which has been with me every day when the Clearing House association opens.

"It occurred to me, I should think, some ten years ago, that it would be

a wonderful thing if one day's exchanges in the clearing house so exactly balanced that there would be nothing to pay over. See what that would mean. It would mean that all of the sales and purchases of commodities which were represented by these checks and drafts and which have taken place in any one day would exactly balance one another, just as if you swapped your pocket knife for somebody else's penholder on an even basis. The more I thought of this the more anxious I became that it should happen at some time during my service as manager of the clearing house that the exchanges would exactly balance, so that there would not be a dollar to pay over to any one. And at last this became my pet ambition.

"But though this desire came to me a full decade ago, I have never been able to see it gratified. There have been a few times when exchanges which aggregated a hundred millions or thereabout have been made with a few hundred dollars' balance to pay. I remember vividly that one day I was

overjoyed with the prospect that the exchanges would balance exactly. What a triumph that would have been! But I was disappointed at the last moment. And now, every day when I come here, I say to myself that I hope this is to be the day when the exchanges will exactly balance."

"Perhaps a year later I met Mr. Camp again and asked him if at any time during the year the exchanges had balanced.

"No, not yet," he said, and then he added sadly: "But I feel sure it will happen before my time here ends."

Some time later, when I saw Mr. Camp after it became known that he was to retire from the management of the Clearing House association, he said to me:

"I have carried this clearing house through some severe panics. The aggregate exchanges effected here have been up into the trillions. But I have got to go away from here with one deep regret, for I never shall see the exchanges at this clearing house exactly balance. And yet it might have been, for it was all chance, and fate was against me."

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Entered Law at Fifty-Seven

Circumstances of the Admission of Gerrit Smith to Bar of New York State as Told by Judge Davis.

"I suppose that no lawyer who has been given a more or less prominent niche in the history of our county was older at the time of his admission to the bar than was Gerrit Smith when that event happened in his life," said the late Judge Noah Davis of the New York bench, who gained national prominence in 1873 when he presided over the trial which resulted in the conviction of that arch grafter, William M. Tweed, on charges of forgery and grand larceny.

"Gerrit Smith—the same Gerrit Smith who simultaneously was one of the country's leading abolitionists and largest land owners, the friend of John Brown through all his adventures and yet one of the three men who went on the ball bond of Jefferson Davis following his capture and imprisonment in Fortress Monroe after the close of the Civil war—was fifty-seven years of age when he became a member of the bar of New York state.

And the circumstances of his admission, which is related to me, were exceptional.

"Smith went to congress in the middle-fifties from a New York district. About that time a runaway slave, known as Jerry, had made his way across New York state, had been traced to Syracuse, and from that city had been able to cross Lake Ontario into Canada. So the United States marshal, acting under the fugitive slave law, was not able to lay his hands on Jerry and return him to his owner; but he did secure evidence, as he thought, which justified the arrest and prosecution of several citizens of Syracuse charged with aiding and abetting the escape of a runaway slave. One of these men was Moses Somers, at that time the editor of the leading paper of Syracuse. The men were accordingly arrested and taken to Albany to be arraigned before the United States district court.

"As soon as Gerrit Smith heard of the arrest of the men—his home was at Peterboro, a short distance from Syracuse—he hurried to Albany, offered himself as their counsel, had his offer accepted, and appeared in the United States court with the accused men. Smith, let me explain, for years had appeared before the state and federal courts, but he had never been admitted to the bar—he had always appeared as next friend, a matter usually very easy of arrangement in the old days. But in this particular case the court, which had long been suspected of pro-slavery leanings, refused point blank to permit Mr. Smith to appear as next friend for the accused men, even when Mr. Smith protested vigorously that he had the right so to appear, and the cases were adjourned for a day to give the prisoners opportunity to obtain counsel who were members of the bar.

"Late in the afternoon of that day Judge Ira Harris of the state supreme court and afterwards United States senator—the father of the Miss Harris who sat in the box with President Lincoln the night of his assassination in Ford's theater, called Mr. Smith before him.

"Mr. Smith," said Judge Harris, "I have just been told that the United States court this morning refused to receive you as counsel for the men who are accused in the 'Jerry' case, on the ground that you have not been admitted to the bar. Now, if you will come into my court tomorrow morning I will admit you to the bar ex gratia."

"So, the next day Gerrit Smith, who had studied law in his early manhood and had a wonderful knowledge of it, appeared before Judge Harris, was asked a few questions, was admitted to the bar, and received from the clerk of the court his certificate. Then he went to the United States court room and said to the judge there that he was now a member of the bar of the supreme court of New York state and showed his certificate. He further stated that he was present to appear as counsel for the men accused in adding the slave known as Jerry to escape. There was nothing for the court to do but recognize him as counsel, and he managed the case so well that the prosecution of his clients was soon abandoned by the federal authorities. It was the first and last case that Gerrit Smith won as a lawyer."

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Vain Offer of Boss Tweed

How George Jones Absolutely Refused to Sell the New York Times So Contemplated Exposure Could Be Prevented.

One hot day in the midsummer of 1871 George Jones, at that time proprietor of the New York Times, took his accustomed seat in a little billiard saloon which occupied a part of the basement of the old Times building in Printing House square. Mr. Jones was very fond of the game of billiards, although he did not play it himself, and it was his habit to spend a half hour at noon each day, if he had leisure, watching the billiard experts.

On the day in question Mr. Jones was suddenly called from his place by a messenger who had evidently been sent from his private office on the main floor of the Times building.

In that office he found a lawyer and a man of business, both of whom he recognized at once as personal friends of William M. Tweed, who was the boss of New York city.

"My father received the two gentlemen very politely," said Gilbert H. Jones, who inherited the Times from his father. "He knew perfectly well what they had called for. He had only a day or two before gone over with Mr. Lewis J. Jennings, then the managing editor of the Times and afterward a member of the English parliament, all of the proof sheets of the first exposure of the Tweed ring. It was through Mr. Jennings that the Times came into possession of the incriminating documents copied from the books of the comptroller of New York city, Connolly, who was a member of the Tweed ring.

"After the formal greetings were over, one of the gentlemen said to my father that he had heard that the Times newspaper property was for sale. Father replied that he had not said to anyone that he was willing or anxious to sell the Times. Then

"Who wants to buy?" my father asked.

"We represent the parties; I don't see what it should make any difference to you who they are," was the answer. "We are willing to give a million dollars in cash and the rest in A-1 securities."

"Well," said my father, "it makes all the difference in the world who the parties are. I might sell the Times for five million dollars to a man who I know would maintain its good reputation; but, for example, I will say to you that I would not sell the Times to Boss Tweed or any of his gang if I were to be offered ten times five million."

"Why not?" the lawyer asked.

"Because," said my father, "if I were to take any money from Tweed or his ring then I would become a participant in their iniquities and the Times would receive its share of their stealings; and so I think I have said to you, gentlemen, all that is necessary to say in order that you may inform those whom you represent that the Times newspaper is not for sale to them at any price."

"A day or two later," continued the son, "the Times published its first exposure of the Tweed ring, and from then on until Tweed and his gang were driven out of public life and public office my father kept up his fight against them."

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Rich West African Land

Territory That Germany Is Said to Be Prepared to Cede to France.

Togoland, which, according to the Berlin and Paris papers, Germany is prepared to cede to France in return for various concessions on the part of the latter country, is one of the most interesting of the West African territories. It was annexed by Germany in 1884. Its coast line is only 32 miles in length, but its extreme length is 350 miles. The area of the colony is about 37,700 square miles; its population numbers about 1,000,000, but in 1903 only 330 of these were white men. In its article on "Togoland" the new "Encyclopedia Britannica" gives also some serviceable facts about the country's trade and inhabitants. The inhabitants are negroes and negroids. Among the last people there is a distinct infusion of Portuguese blood, and in all the parts are descendants of Brazilian

negroes who returned to Africa during the nineteenth century. About its industrial development we are told that "the country is rich in natural products, and its resources have been largely developed by the Germans. It was the first German colony to dispense (1903-1904) with an Imperial subsidy towards its upkeep. Several firms have acquired plantations, in which coffee, cocoa, cotton, kola, and other tropical products are cultivated."

Elusive English.
When a sturdy Slovak entered a store in lower Broadway the other day the dapper clerk, wishing to put the foreigner at his ease, observed cheerfully:
"Hello, John! How's your liver!"
After a minute's reflection the foreigner's dull face beamed with intelligence and he replied:
"Oh, yes—no liver in Brooklyn."

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