

## Correspondence.

## Mosquito Extermination.

To the Editor of the SCIENTIFIC AMERICAN:

I note in your issue of the 9th, under the heading "The Progress of Mosquito Extermination," that "it follows that the only remedy is to prevent the production of the pest." Is this true? No doubt if the malarial mosquito could be exterminated there would be an end to the propagation of malaria through this means, but it is not claimed, I understand, that the mosquito can, of itself, propagate the disease. It must first have had access to an infected person. Would it therefore not be much easier to protect the patient from the mosquito than to exterminate hordes of the latter?

R. W. BURNS.

Great Falls, Montana, July 12, 1904.

## Myth of the Catalpa Tree.

To the Editor of the SCIENTIFIC AMERICAN:

During the past few years I have occasionally read with much interest articles in different publications concerning the wonderful value of this tree, and the great profits that will be derived from its propagation. While it is one of the finest shade trees, owing to its dense foliage of large leaves, frequently the size of a palm-leaf fan, and its great bunches of beautiful delicate-colored blossoms, I doubt the advisability of growing them for revenue.

I have two of them in my home lot; the oldest was planted fifty-one years ago, and the other is twenty-six years old. The former now measures five feet eight inches in circumference, equivalent to twenty-two and one-half inches in diameter, and nine feet to the lowest limb, above which it branches out in the most irregular shapes; the latter is thirteen and one-half inches in diameter, and seven feet to the first limb. This shows only an average annual increase in diameter of one-half inch, instead of double this amount, as quoted recently by a prominent arboriculturist, who must have been dreaming, as our most rapid-growing trees, the willow and cottonwood, do not come up to such a rating.

In my yard I also have a walnut tree of about the same age and size of the youngest catalpa, which confirms my claim of the slow growth of the latter. My life has been spent in the States of Illinois, Indiana, and Missouri, where these trees are indigenous, and when a boy I have smoked their pods until my tongue was blistered, but never saw one that would make a telegraph or telephone pole, as claimed by the above-mentioned authority, owing to the crookedness above the lower limbs.

From these facts they can only be used for fence posts and railroad ties, as the slight variation in the color of their grain does not fit them for natural finished woodwork. Now let us figure out the profits for growing them for these purposes. My fifty-one-year-old tree will make two railroad ties, worth forty cents each hewed and delivered, more than one-half of which is covered by the cost of the labor, so my two catalpas, if used for that purpose, would net me about fifty cents. They might have been sold at ten cents each for six-inch fence posts when twelve years old.

You can grow these trees less than twenty feet apart, or one hundred to the acre, which in twelve years will bring you a total of ten dollars for fence posts. For railroad ties you can plant sixty trees to the acre, worth after eighteen years about eleven dollars. After liberal allowance for the limbs for fuel, anyone can see the same amount of land put in grain will pay a much greater net profit.

About seventeen years ago an enterprising person planted twenty acres in catalpa trees in a most favorable location on the Mississippi River bottom lands, about twelve miles north of Hannibal, Mo., adjoining our railroad. I have ridden by this field frequently, and watched this experiment with much interest. He has recently sold his trees for fence posts, the returns of which paid him a little more than his taxes. If he had planted in corn annually, he could have made two thousand dollars net profit.

S. E. WORRELL.

## Are Pressmen Affected by Electricity from the Belts?

To the Editor of the SCIENTIFIC AMERICAN:

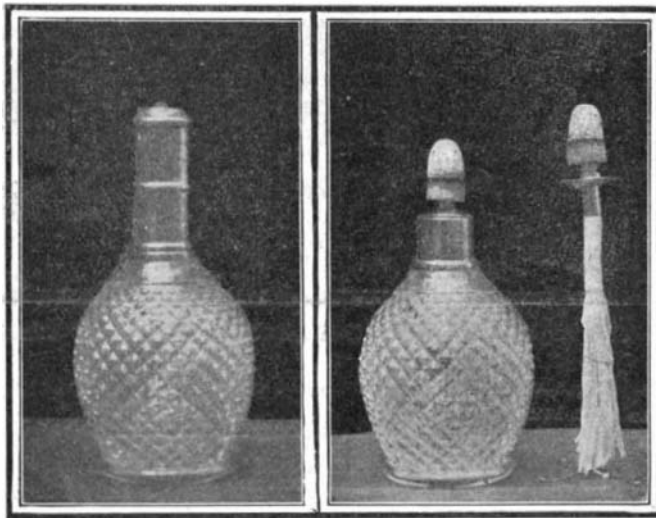
I have given a good deal of thought during the past few years to a subject which I have had the intention for some time past of writing to you about. We are engaged in the printing and publishing business, and we have a pressroom in which electricity is the motive power used. I have noted through a series of years the continual sapping of the nerve energy that seems to be in process among the young men who operate the presses.

I have particularly in mind a young man who came to work for us about four years ago, at that time about twenty years of age, who worked with us for four years, and we considered him very dexterous and

a rapid worker, but during the time that he was with us his health suffered and slowly and gradually declined, until the past year he seemed barely able to keep at his day's task. Two months ago he left our employment and went to Boston, where he took up composition instead of presswork, and I was struck upon seeing him four weeks later with the marked improvement in the color of his complexion and the brightness of his eye in so very short a time. He is a very temperate young man, of good habits, and the decline I speak of I am sure could not be attributed to outside excess.

We have had other men, strong and healthy, with a good firm grip on their nerves, who would not decline in spirit and energy, but would get all nerved up at their work and get so irritated that they would fairly kick things around without seeming to know exactly what they were mad about. Another young man I recall was so sick at the stomach upon starting on the work that he could not stand up to the press and it has been an unflinching observation of mine that everyone who has worked at our presses has been affected in their health or their grip on their nerves, and I have wondered if it were not the electricity that had a great deal to do with it. One thing that has contributed to an affirmation of this thought is that the atmosphere always seems to be hot and surcharged so as to induce a sort of feverish feeling about the temples, and whenever one approaches near to the belts the electrical attraction will pull at the hair and make it stand out straight in their direction. If one just pass near them in a hurry a prickly sensation will be felt on the skin of the hand as it swings past, and if the finger be held on the belt a stream of actual electrical fire or animal magnetism will shoot from the finger to the belt.

Another thing that has impressed me quite strongly was this: On two different occasions on a holiday I myself have been down to the office to run off some little card or something of a private nature for my



BERGER DISINFECTING LAMP.

wife or myself, and my wife has come down with me for company. She has a highly sensitive nervous temperament. Both times she took a chair and came out to be near where I was at work. But both times she got up and went off to an adjoining proofreader's room. Both times I urged that she come back and be near where I was, but she replied: "No; I think I'll stay in here." Upon further urging she replied: "No; I don't like to sit out there." I asked why, and she replied: "I don't know why, but I don't like it out there." Having practically this same conversation with her both times, it made quite a strong impression on me.

I do not believe the electrical power is good for one's nerves and health, but I know that in factories where steam power is used there is very much the same electrical feeling to the atmosphere and the pulleys have electrical attraction in the same way, but this makes me also think of a further fact that I am familiar with, though I do not know what the scientific explanation of it is. Corn ground in a grist mill that is run by steam will generate so much heat within itself or acquire the heat in some way from the machinery that it will burn and spoil itself, if left in large bulk after being ground; but corn ground in a water mill or mill run by water power will not heat itself or be affected in this way.

These observations are enough to make me believe that there may be a great deal of difference in the healthfulness of different kinds of motive power. I would like to ask if it is a subject to which any attention has ever been given, and if you are aware of anything that has ever been written on the subject. I have already written to one or two prominent specialists on nervous diseases, but have not been able to find out that there is any literature on this subject in existence. If you can give me any information on the subject or any suggestions that will help me to

pursue it further, I shall be very grateful. I would also like to know what the reason is that grinding by steam power heats corn, whereas grinding by water power does not.

If there are any of your numerous readers who have been interested in this subject of power I would be glad to hear from them.

ALBERT W. DENNIS.

Salem, Mass., July 20, 1904.

## The Accident to Mr. Barton.

The maiden ascent of the Barton airship, which was to have taken place early in the morning of July 4 last, had to be abandoned, owing to an unfortunate accident which seriously injured the inventor. The gas bag was in course of inflation, the hydrogen for which was being generated in the usual manner by the decomposition of sulphuric acid with iron. The inventor was examining one of the gas retorts, when the cylinder suddenly exploded with terrific force. The inventor unfortunately received the full charge of the explosion in his face, his hair, eyebrows, and mustache being completely burned away. Furthermore, many steel splinters entered his eyes, completely blinding him. Dr. Barton was conveyed to his home on a stretcher, and it was found upon examination that his injuries, especially to his eyes, were of a very severe nature. It was at first feared that his eyesight was destroyed, but the steel splinters were successfully removed. Although he is now progressing favorably, some uncertainty exists as to whether his sight will be affected, and it will be some weeks before he can again superintend operations. The balloon fortunately was not injured by the concussion, and the work of inflation was continued. By the time the inventor is recovered, the airship will be in complete readiness for the first ascent.

## THE BERGER DISINFECTING LAMP.

The object of the lamp that a Parisian inventor, named Berger, has introduced, is to produce a disinfection through the disengagement of formic aldehyde and ozone resulting from the combustion of rectified alcohol, wood spirit, or a special product called ozoalcohol and containing essential oils distilled from labiate or myrtaceous plants.

The lamp owes its wonderful properties to a mantle of secret composition. The lighting of it is accomplished very simply. A few drops of alcohol are sprinkled upon the mantle and ignited. When the mantle becomes incandescent the flame is blown out. The incandescence is then kept up by means of alcohol supplied by the wick.

The inventor recommends his apparatus for disinfecting and deodorizing apartments, and especially sick rooms. If the lamp disengages formic aldehyde and ozone, there could be nothing better; but does it not disengage also carbonic oxide, or at least carbonic acid? It seems difficult to burn a hydrocarbon without obtaining one at least of these gases, which are far from being hygienic.

During the recent maneuvers between the submarine flotilla and the battleship squadrons of the British navy, some ingenious ruses were adopted by the former to mislead the latter, with conspicuous success. One of the most successful was the building of an exact replica of the conning tower and a short length of the top of the submarine, of canvas material. This was painted the same color as the submarine, and was attached to the top of the craft. The submarine then traveled toward one of the hostile vessels, and when within range and as conspicuously as possible, the canvas structure was released. It immediately floated to the surface of the water. Directly the submarine had discarded the mock structure it sank again, and completely altering its course approached the vessel from another quarter. The canvas ruse being conspicuous immediately attracted the warship's attention, and a severe fire was directed upon it. While this firing was in progress the submarine arose again to the surface on the opposite side of the warship, and succeeded in launching a torpedo unobserved and at close range. The ruse was therefore completely successful. The possibility of catching submarine boats in steel nets was again shown, as recently described in the SCIENTIFIC AMERICAN. The nets were of an improved type, larger and considerably stronger than those previously employed. The experiment, however, proved again successful, as the submarine after being caught in the net was so completely entangled that all its efforts to escape were futile. Several other novel attempts with other trapping and deceiving devices were carried out, but owing to their important nature the results obtained were maintained a strict secret by the Admiralty.

Some interesting experiments to demonstrate the rotation of the earth are to be carried out with marbles in the Pantheon at Paris. The marbles will be dropped from the cupola to the ground, and careful records of their deflections during their descent made.