Correspondence.

Stability of High Buildings.

To the Editor of the SCIENTIFIC AMERICAN:

I saw in the SCIENTIFIC AMERICAN of March 21 an article on the stability of lofty buildings. Perhaps an instance or two, that came under my personal observation, would be of interest to you. I was in the D. S. Morgan building, corner of Niagara and Pearl Streets, Buffalo, N. Y., during the gale of December 23—I think that was the date. The wind reached a velocity of 73 miles per hour. I was in a room on the eleventh floor, about 120 feet from the ground. A weight was hung to a gas burner by a cord about 2 feet long. The weight vibrated or swung at least 6 inches. If the building did not swing, what caused the weight to move?

On the 4th of March I was at the lighthouse on Hog Island, Va. This is an octagonal structure, of cast and wrought iron. The base is 50 feet. The height to the focal plane, 175 feet. The watch room is about 10 feet in diameter; this and the inclosed stairway is all there is to offer a surface to the wind, except the eight columns and braces. This tower vibrated so that a pendulum clock could not be kept running.

S. T. S.

Ignition Temperature of Acetylene Gas.

To the Editor of the SCIENTIFIC AMERICAN:

In experimenting recently with acetylene, I was surprised to find its ignition point so low that it would take fire through the gauze of a Davy lamp. I tested it by lowering the lighted lamp into a jar of the gas and also by directing a jet of the gas against the lamp. In both cases the acetylene took fire outside the protecting gauze about as easily as hydrogen would. CH_4 and C_2H_4 will not ignite in this way, and it seems strange that the higher carbide C_2H_2 should. It must be very unstable. Can you give any further explanation?

A. E. COLDWELL.

Acadia College, Wolfville, N. S.

[Acetylene gas is known to possess a very low temperature of ignition. It is not very easy to assign a good theory for it. In recent lectures on "Flame and Combustion," by Profs. Lewes, Smithells, and others, as published in our SUPPLEMENTS, you will find given many excellent points in connection with flame, etc. Dr. Lewes' article on acetylene is in our SUPPLEMENT, No. 998. Other papers, by the same authority, on "Flames of Hydrocarbon Gases," will be found in Nos. 876, 1012, 1013. A very good series of lectures, by Prof. Smithells, on "Flames," were given in Nos. 846, 850, 930, 941, and 942.—ED.]

Lumber Destroyed by Fungus.

To the Editor of the SCIENTIFIC AMERICAN:

We to-day express you a package containing two pieces of wood which you will see have been destroyed by some growth, which growth is very common in this section of the country and has found its way into one of our lumber sheds. It is very destructive to all grades of lumber. Please advise us through mail or your columns of a cure for this trouble. Would prefer a wash if one can be had that will do the work.

Beaumont, Texas. M. K. F.

[The matter having been referred to the Division of Vegetable Physiology and Pathology of the United States Department of Agriculture, the chief of division reports as follows:

"The letter and pieces of pine board which you referred to this division from Mr. M. K. F. were duly received. The samples are affected with the ordinary bench rot fungus, mycelium of Polyporus sp. The lumber sheds mentioned should be kept drier if possible. Probably several thorough washings of the lumber and sheds with strong copper sulphate solution, one pound of crystals to the gallon of water, would thoroughly disinfect the lumber. We have washed some of the benches in one of our greenhouses with Bordeaux mixture containing an excess of copper and they are thoroughly free from this fungus, while it is quite common on benches which have not been washed."

B. T. GALLOWAY,
Chief of Division.]

A Novel Cure for Colds.

Among the numerous remedies recommended for colds, the following from the Hospital of February 22, republished in the Literary Digest, is the most novel. It is one Dr. Schnee who propounds the novel cure. Dr. Schnee . . . percusses the terminal branches of the nerves supplying the mucous membrane of the nose with a small hammer made of India rubber. Slight shocks upon terminal nerves have the effect, as has been experimentally demonstrated, of contracting the blood vessels. . . . Stronger shocks produce dilatation of the same blood vessels. . . . Here, then, we have a method of exercising a great deal of control over those nasal blood vessels whose altered condition constitutes the initial stage of coryza. In the inception period of a cold, what is wanted is to set up contraction of nasal and naso-pharyngo-laryngeal blood vessels. For this purpose slight "tappings" with the India rubber hammer are to be resorted to. The locality to which the percussion should be applied is the forehead, just above the root of the nose; and the "taps" should follow a line extending horizontally outward over the eyebrows. The "tapping" should be frequently interrupted and resumed, since it is manifest that continuous "tapping" would overstimulate and finally exhaust the vasomotors, thus exaggerating the very evil the remedy is designed to cure. In cases of chronic catarrh the "tapping" is also valuable, only in this condition it must be of a heavier degree and more sustained; what is wanted being first a free secretion of mucus, and afterward a return to a condition of normal vascularity. The method is interesting, and based on physiological reasoning. Let us hope it will prove as effective in practice as it sounds scientific in description.

Science Notes.

In the Johns Hopkins Hospital at Baltimore, a patient under hypnotic influence was operated upon successfully for diseased kidney, no anæsthetics being used. This case is the first in which hypnotism has been used in that institution.

Laudenbach (Virchow's Archiv, cxli-i, 1895) reports having removed the greater portion of a dog's spleen, and at the end of six months there was a complete regeneration of the entire organ. The removal caused profound disturbance of digestion and impaired nutrition, but notwithstanding this fact the entire organ was reproduced.

According to Prof. Kobert, the active principle of the male fern is not only filicic acid, but also the essential oil, which forms a kind of loose compound with the fatty acid. This mixture, or compound, is easily emulsified in the intestine, and exercises a stupefying action upon the tapeworm, which is then expelled by a laxative. The ethereal extract of male fern should be prepared from the rhizomes gathered in the autumn, says the Phar. Zeitschrift, for the spring collection is less certain in its action.

The Temperature of the Sun.—Prof. Paschen has (says the Gas World) been investigating the temperature of the sun. Among recent observers Rosetti has found a temperature up to 10,000° Cen. by means of a thermopile; Le Chatelier one of 7,600° Cen. by comparing the absorption of solar rays with that of rays from a hot object; Wilson and Gray one of 6,200° Cen. by balancing the radiation from the sun against that from a glowing strip of platinum, in a Boys radiomicrometer; Scheiner one between 4,000° Cen. and 10,000° Cen. by measuring the breadth of the magnesium lines in the spectrum. Now Prof. Paschen reckons it by considering the wave length of the radiation of maximum energy in sunlight as inversely proportionate to the absolute temperature of an incandescent body; and this works out a solar temperature of 5,130° Cen. = 9,266° Fah.

Memory of Bees.—On August 16, says a correspondent in Science Gossip, we took a quantity of honey in frames from the tops of the hives (super honey). The hives are in an orchard at the bottom of the garden. When cleared of bees the frames of comb are usually carried through the garden to a disused cottage at a distance of seventy yards from the nearest hive. On arriving here we found a number of bees, which had preceded us, flying round the cottage awaiting the arrival of the combs, which, however, still remained in the clearers in the orchard. No honey had been taken since June 21 last, and no bees had been noticed near the cottage in the interval.

The American Meteorological Journal will be discontinued with the April number, as it has been carried on at a financial loss ever since its foundation in 1884.

It is quite generally supposed that the sudden and complete freezing of lakes and watercourses must necessarily be fatal to all their inhabitants. Recent experiments by a French scientist, M. P. Regnard, have proved this to be an error. He cooled the water in an aquarium containing live carp to different degrees below freezing. At 0° C. the fishes seemed to fall asleep, but were not frozen. At —3° they were apparently dead, but retained their flexibility. The water being then gradually warmed, they revived, began to swim, and showed no signs of suffering. This would indicate that the polar seas, whose temperature never falls below 3° C., may be a congenial abode for creatures inured to this degree of cold.

The President of the United States has nominated John J. Brice, of California, to be Commissioner of Fish and Fisheries, in the place of the late Marshall McDonald. This office is one of the most desirable of the government's scientific positions and is practically a life office. Capt. Brice is a retired naval officer.

Nearly $800,000 is asked from Parliament for the support of the British Museum for this year.

M. H. Moissan has recently presented to the Paris Academy of Sciences the results of some interesting experiments with carbides. He finds that cerium carbide produced in the electric furnace yields when treated with water seventy-five per cent of acetylene, with much methane and some ethylene. Lithium carbide yields pure acetylene, which is a transparent crystalline mass.

The mortality rate among medical men of France is but twenty-six per one thousand, the actual number of deaths per annum being about 450.

The Swiss botanists, MM. Sommier and Sevier, who have recently explored the Caucasus, says the Popular Science News, tell of a mountain flora of giant herbaceous plants, of which little was known before, which they designate as Macroflora. At the altitude of 5,800 feet, some plants reach a size which they never obtain in the valleys. A campanula, which does not exceed about two feet below, grows to about six feet high at that altitude and has an unpliable stem.

The meldometer, an instrument invented by Dr. Joly, of Dublin, consists of a thin platinum strip which can be heated by the passage of an electric current. Small fragments of a solid substance are placed on the platinum strip, and the temperature at which they melt is deduced from the length of the platinum strip, which has been previously calibrated by means of solids of known melting points. A number of measurements have been made of the melting point of calcium, sodium, strontium, barium and lithium.

Arthur P. Greeley—Value of Civil Service Illustrated.

The value of the civil service requirements as applied to the United States Patent Office is illustrated in the appointment on April 1, 1895, of Arthur P. Greeley, of Concord, New Hampshire, a Republican in politics, by President Cleveland, and since confirmed by the United States Senate on March 6, 1896, to be examiner in chief in the Patent Office. We say the value of the civil service requirements are demonstrated in this case because it was purely merit and ability alone that gained for him the honorable position he has attained; the wisdom of it will become evident in future years.

Mr. Greeley is a graduate of Dartmouth College, in the class of 1883. A lawyer by profession, having been graduated from the law school of the Columbian University of Washington in the class of 1887, taking the post-graduate course at the same school the following year. The next year, 1888, he was admitted to practice in the District of Columbia.

In July, 1884, he entered the Patent Office as a fourth assistant examiner, as a result of his standing in the first examination for appointment to the Patent Office held under the present civil service law. Was promoted through the successive grades of third, second and first assistant and principal examiner solely on merit as the result of standing in competitive examinations held in the office.

As an assistant examiner he served in the division of metal working B and electricity B, in the latter division having charge of the class of electric railways.

On appointment as principal examiner in July, 1891, he was assigned to a newly formed division comprising packing and storing vessels, advertising, etc. Was transferred in 1894 to the division of instruments of precision, and while in charge of this division for a number of months, acted also as examiner of trade marks.

From 1891 to 1893 he was a member of the committee having in charge the preparation, arrangement and installation of the exhibit of the Patent Office at the Chicago World's Fair, which involved an extended consideration of the development of nearly every important art represented in the Patent Office. He was also a member of the committee having charge of the preparation and installation of the Patent Office exhibit at Atlanta.

He is one of the first under the present civil service law to be appointed and advanced through the successive grades and to receive a presidential appointment on merit solely.

Fairs Next Fall.

The following appointments have been made for the State fairs and other important exhibitions of the present year:

American Live Stock, New York	Nov. 23, 28
American Institute, New York	Sept. 28, Oct. 29
British Columbia, New Westminster	Oct. 6, 9
Connecticut, Meriden	Sept. 9, 11
Illinois, Springfield	Sept. 28, Oct. 3
Iowa, Des Moines	Sept. 4, 11
Kansas, Wichita	Sept. 22, 27
Maine, Lewiston	Aug. 31, Sept. 4
Manitoba, Winnipeg	July 20, 25
Massachusetts ("Bay State"), Worcester	Sept. 1, 4
Massachusetts Horticultural, Boston	Sept. 2, 8
Nebraska, Omaha	Aug. 27, Sept. 5
New England, Portland, Me	Aug. 17, 21
New Hampshire Milton	Sept. 7, 10
New Jersey, Waverly	Sept. 7, 11
New York, Syracuse	Aug. 31, Sept. 5
Ohio, Columbus	Aug. 31, Sept. 4
St. Louis, St. Louis	Oct. 5, 10
South Carolina, Columbia	Nov. 9, 13
Toledo, Tri State, Toledo	Sept. 21, 29
Toronto Industrial	Aug. 31, Sept. 12
Virginia Stock, Staunton	Sept. 8, 11
Washington, New Whatcom	Sept. 29, Oct. 2
Wisconsin, Milwaukee	Sept. 21, 26

—Albany Cultivator.