

meat into the hags, crowding it in closely. Tie and keep in a cool place. When needed turn back the bag, slice off the meat and cook until brown and crisp.

In the valuable report on oyster culture, just issued by the fish commission, the so-called fattening of oysters just previous to sending to market, to give them an illusive appearance of plumpness, is severely condemned. Not only does this process add nothing whatever to the nutritive qualities of the oyster, but, on the contrary, it takes away 13 per cent of its original nutritious substances, protein, fats, carbohydrates and mineral salts, and destroys its flavor. It is during this process, after being removed from their shells, that oysters sometimes consume disease germs with their food, which germs are afterward transferred to human anatomy with serious results. Indeed, it is not an impossible hypothesis that the original source of the typhoid fever germs so often attributed to the consumption of raw oysters may have come from the polluted water in which the oysters have been fattened.

On the contrary, the fish commission combats the popular prejudice against "green" oysters in America. "A number of careful investigations," say they, "have proved conclusively that such oysters contain no copper, nor anything else deleterious, but that the green color is derived from a harmless blue-green substance, phyco-cyanin, which is found in certain of the lower plants in brackish or saline water. Such oysters are usually fat and well fed—the result of the abundance of nutritious food. If the color is undesirable it may be removed from the oysters by transferring for a time to waters in which the green food is deficient.

Hot meats and soups will inevitably spoil if set away closely covered. There must always be an escape for the hot air. Broths must be thoroughly cooled before going into ice chest, and then only lightly covered.

EMMA PADDOCK TELFORD.

### SCIENTIFIC MISCELLANY.

The tendency to form at the same time a poison and its antidote was mentioned by Dr. T. Lauder Brunton, in his address at the Moscow International Medical Congress, as one of the most curious points in the chemistry both of the higher plants and of microbes. In Calabar bean, for example, we find two poisons—physostigmine and calabarine, the former tending to paralyze the spinal cord and the latter to stimulate it, so that each poison to a certain extent antagonizes the other. The same is true even more markedly of jaborandi, whose two alkaloids—pilocarpine and jaborine—so antagonize one another's action that, while pilocarpine generally predominates, it might be possible to get a specimen of the leaf having no action at all. When injected into animals the toxins formed by microbes and the venins of by serpents cause the production of anti-toxins and anti-venins which neutralize their action apparently by chemical combination, in somewhat the same way as an acid and an alkali, each poisonous by itself, combine to form a comparatively inert salt.

While the general effect upon metals of traces of foreign substances are deleterious, certain combinations are known to be very useful and valuable. A very complete manual of alloys just published at Milan names Margot's alloy—a combination of 22 per cent of

gold with 78 per cent of aluminum—as perhaps the most beautiful, although lacking in malleability. The color is purple, with curious ruby-red reflections. The yellow alloy of platinum and aluminum can, by a modification of the proportions, be rendered violet or greenish. A rose-colored alloy is obtained with 750 parts of gold, 200 parts of silver, and 50 parts of copper.

The recent Congre's Olympique at Havre passed resolutions favoring the introduction of hygiene, physical training and athletic sports in all schools and colleges, with quarterly reports to parents on the physical development of their children.

Just before the middle of each November the earth crosses the orbit of a remarkable stream of cometary fragments, whose fall into our atmosphere gives rise to the Leonids, or November meteors. These particles move in an orbit whose period equals about thirty-three of our own years, and some of the most brilliant celestial phenomena ever witnessed by man have been due to the fact that this stream of world-dust is mostly condensed into a small portion of the great orbit. Hence it is that on five or six years out of the thirty-three the November meteors are likely to be especially notable. The maximum display is expected in November, 1899, but as a magnificent downfall was witnessed in Europe and America on the morning of November 13, 1864, two years before the last maximum, it is expected that the earth will again enter the densest portion of the meteoric stream this year. Our planet will be central in the stream on November 14, just before daylight in America. This will be mid-day for Europeans, while American observers will have the disadvantage of a moon only five days past the full, so that the expected meteoric shower will probably not be seen at its best.

The sources of the Roentgen rays from a focus tube is determined by a simple experiment by Dean Molloy, a Scotch physicist. A small deal board into which several rows of slender nails have been driven is attached to the back of a fluorescent screen, and the whole mounted on a stand which can be slowly revolved in a circle about the focus tube. The shadows of the nails indicate the exact position of the source of radiation. On adjusting the tube so that the central nail gave only a black spot for a shadow in all positions of the screen, it was found that the radiation must come from near the center of the platinum plate. By means of a pin-hole image, the area of radiation was shown to be an irregularly circular path about a quarter of an inch in diameter.

Oceanography has made such rapid progress in recent years that the best sea maps are defective and out-of-date. Knowledge of the ocean has become of importance to many industries, and pending the preparation of an elaborate sea atlas of large-scale maps, Prof. J. Thoulet urges the publication of large charts showing, in addition to the usual current-charts, the accurate contours of the sea-bottom within 200 meters of the surface and the lithological classification—as "sand," "sandy mud," "muddy sand," and "mud"—of the deposits on all coasts.

A human-like propensity for stealing a ride seems to be possessed by certain insects. In Algeria, Rev. A. E. Eaton has noticed flies of the Borborinae group comfortably settled on the prothorax and wing covers of large coprophagous beetles, as many as half a dozen females sometimes securing passage on a single beetle. The beetle's frantic efforts to free itself from its load by rolling over and scraping with its legs are quite useless. Another ob-

server mentions a lacewing fly, which has on one or both wings black raised spots that are evidently tramp flies in the act of traveling on both wings—though not rapid ones—than its own.

A new life-preserver, recently tested in England, consists of a canvas belt with cork layers at intervals, extra buoyancy being given by four bladder-floats of rubber. The belt is strapped under the arms, and the bladders are inflated through tubes provided with self-closing valves. The advantage claimed is that the wearer is always supported in the water in an upright position, with his face safely out of water, while if a passenger by sea is timid he may wear the belt constantly under his other clothes. The wearer is not prevented from swimming.

The great earthquake of June 12 is found by the Indian Geological Survey to have affected a greater area than the historical Lisbon earthquake. The cylinder seismometer at Shillong recorded an oscillation of 7.4 inches at the rate of sixty times a minute, and masonry was simply shattered to pieces rather than overthrow.

With an apparatus called the myophone, M. D. Arsonval has proved that the nerves may, contrary to the old belief, live many hours after the death of the body. This cannot long be made perceptible through the excitability of muscles, but the sound in the instrument shows that a nerve may act on a muscle, in a state of electric excitability, without producing more than simple molecular vibration.

The only electric traction adapted for crowded city streets is the Vuilleumier system, Prof. Silvanus P. Thompson contends, supplying current through contacts in the road's surface.

### SUNDAY SERVICES.

President Angus M. Cannon presided over the services at the Tabernacle Sunday afternoon, Oct. 17, 1897.

The choir sang the hymn:

"How beauteous are their feet  
Who stand on Zion's hill."

Prayer was offered by Elder J. R. Murdock.

The choir further sang:

"Jesus once of humble birth  
Now in glory comes to earth."

Elder Claudius V. Spencer first addressed the congregation. In commencing he referred to the fulfillment of prophecy in the calling of the weak things of the earth to bear the burden of the ministry in the rolling on of the Church and Kingdom of God here upon the earth. The Lord had said that such should be the case; the weak things of the earth were to confound the great and the mighty. This was one of the mysterious ways in which God worked; He chose the weak and the humble to assist in the accomplishment of His purposes, and they being blessed with His spirit were enabled to do that which it was designed they should do in helping to roll on His work. It was designed that a great and marvelous work was to be established in the earth, and it had been established, exactly as had been prophesied by ancient Prophets and Apostles. It was being wrought out in this day and generation, its home being in the tops of the mountains according to prediction.

Certain Christian denominations, said the speaker, had sought to class the Latter-day Saints as not being worthy the name of Christians. They had sought to dis fellowship them from the rest of the religious world, despite the fact that Mormonism, as they called it, embraced all the principle enunciated by our Lord and Savior Jesus Christ when He was ministering unto the people upon the earth. These denominations did not