

Ernest Brenner, the new president of Switzerland, is only 44 years old, but is one of the ablest international lawyers in Europe. He is a native of the Canton of Basle.

According to advices from London Japan has invited tenders for the establishment of an armor-plate factory at Tokyo, which, it is thought, means that in the future Japan intends to construct her own war vessels.

It conveys a rather striking idea of the growth of the country in population to consider that the two states of Iowa and Minnesota contain together more inhabitants than did the country over which Washington became president in 1789.

Owing to the ever increasing number of her warships in the Pacific Russia has decided on extensive improvements at Vladivostok and Port Arthur. The cost of these figures in the budget for 1901 amounts in round numbers to the comfortable sum of \$1,000,000 for Vladivostok and \$1,500,000 for Port Arthur.

Electricians have just talked across the Mississippi at St. Paul by telephone without wires, and it is believed that conversation can be carried on in the same way at twelve miles distance. May we not look forward to the time when all the people of the earth will be for social purposes in a single room?

At an experiment in St. Joseph, Mo., a cat was apparently killed by a shock of electricity carefully administered. Two hours after the heart had ceased to beat the current was reversed and the second shock restored the heart beats, faintly at first, but growing stronger until the cat was finally released as playful and frisky as ever.

Tunis, the famous black horse which General Boulanger rode at the review in 1886, has died. Before his death the former minister of war consigned the animal to the charge of his friend, M. Louis Barbier, who sent it to the Gironde to end its days in peace. It has been decided to send the animal's tail as a present to M. Henri Rochefort.

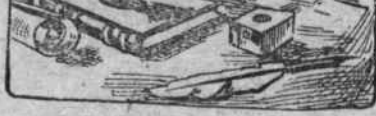
The minister of war in Sweden has prepared a bill establishing compulsory military service and there is no doubt that in due course it will be passed by the Swedish parliament. Up to the present time the Swedish army has been recruited by voluntary enlistment, deficiencies being filled up by a certain number of men being compelled to serve for a period of ninety days.

Plans for a new botanical school, which is to be erected by Henry Phipps in Schenley Park, Pittsburg, have been completed. This school will be the only one in the United States devoted exclusively to the study of botany and is to be so located with reference to the park conservatory that the plants there can be made use of for purposes of instruction. The institution is intended for the benefit of the pupils of the public schools, as well as for that of private classes.

A group of mechanics who are now returning from British India bring with them the story of an American expansion in which all can rejoice. They have just completed the construction of a great steel bridge in the Shan Hills of Burma, which is to be part of a railroad built by the government from Rangoon into China. The steel was made by a Pennsylvania concern, which secured the contract in competition with the world. Three great freighters conveyed the structural material across the seas, and forty mechanics went out to do the skilled work. Higher than the tallest office buildings of Philadelphia and nearly half a mile long, this bridge is a fitting monument to the expansion of American trade.

The representatives from Louisiana will make an effort to induce congress to provide for the translation and publication of some sixty volumes of manuscript now in the Ministry of Colonies of France, which relate to the early history of the Mississippi Valley. The existence of the works was discovered by Prof. Alcee Fortier, president of the Louisiana Historical Society, while making researches last summer. The volumes contain correspondence of the colonial governors, orders, proclamations, census, grants of land, registry of marriages, births, and deaths, accounts of the colony and various data referring to the colony from 1678 to 1807. This literature undoubtedly contains matter of great interest bearing on the early history of the Mississippi valley, but it might very well be translated and published at the expense of the states directly interested.

# SCIENCE AND PROGRESS



## NEURASTHENIA.

Neurasthenia, or "nervous prostration," has been called the "American disease," because we in this country are supposed to be possessed of a restless energy which wears upon the nervous force and finally exhausts it.

Both neurasthenia and hysteria were formerly, and are by many even yet, regarded as trivial affections; and sufferers from them were unjustly looked upon with something akin to contempt as creatures of weak will power, who might be well if they chose.

But neurasthenia is a very real disease and sometimes a terrible one, although the doctors are as yet unable to discover any palpable change in the nervous system to account for the symptoms. It seems to be, as its name implies, a real nervous exhaustion; there is no visible change in the nervous system, but it is simply tired from overuse and unable properly to perform its delicate functions.

The symptoms of neurasthenia vary greatly in character and in degree, yet they are usually quite easily recognizable as being due to nervous exhaustion and not to actual organic disease of any part of the nervous system.

The mind is tired; the patient is unable to concentrate his thoughts on his work, and often finds himself sitting doing nothing while matters requiring his immediate attention are accumulating, and life has lost its charm. The little sleep he gets is disturbed by dreams, and the morning brings no refreshment.

Various weary sensations, pains, chilly feelings, numbness, and so forth, are complained of in different parts of the body. Dizziness, ringing in the ears, dimness of vision or floating spots before the eyes, headache and pain in the spine are common symptoms. The heart is irritable, very slight causes increasing the rapidity of the pulse. The neurasthenic is often dyspeptic and usually has a poor appetite.

The treatment is apt to be difficult, for the reason that the patients are hard to manage. The main thing is rest, both mental and physical. Yet the sufferer should not be wholly idle. He should, if possible, leave home for a time and stay in some quiet place where there is enough going on to interest without exciting him.

Long hours of sleep, nourishing food with plenty of cream and butter, moderate daily exercise in the open air, and especially entire freedom from worry, are the main points in the treatment of nervous exhaustion.

## LIQUID INSECT CATCHER.

The increased destruction of city trees by insects during the past few years has caused the inventor to design a number of devices to prevent the pests from crawling up the tree trunk and depositing eggs in the branches as well as eating the leaves. Hitherto the guards have consisted of bands of loose fabric, cotton wadding, etc., being generally treated with a chemical and bound tightly on the tree trunk. His invention, which we show herewith, however, is a radical departure from former ideas, inasmuch as the chemical is in a liquid form and is contained in a circular pocket surrounding the tree, making it impossible for any insect or worm to crawl up the trunk of the tree without passing through the liquid. The guard is in two sections, which are clamped together around the tree, with a layer of



FOR DESTROYING INSECTS.

packing beneath the guard and the bark to form a tight joint. The circular gutter is provided with two separate circles of liquid to insure the death of those insects which might possibly survive a single bath in the poisonous fluid.

## ABOUT WIRELESS TELEGRAPHY.

The Chief Inspector of French Telegraphs, M. Willot, has communicated a paper to the Electrical Congress in which he states that it is his belief that ether wave telegraphy will soon become obsolete. He is a well-known

inventor and inventor of telegraph and telephonic devices. He has come to the conclusion that it is the earth, and not the air, through which signals are transmitted, without the use of wires, and that the curvature of the earth and intervening hills do not intercept the signals, and this suggested to him the question whether the matter telegraphed left the masts at the top or bottom. He believes that it left at the bottom, as the signaling is not affected by wind or fog and is improved by giving the masts good electrical communication with the earth. According to his theory, communication is kept up through geological beds, in which the electricity of the earth has the same tension, so that disturbances on one point at the same electrical level creates a swell in the lower level, leaving the higher and lower strata comparatively undisturbed. He proposes to tap these levels by means of shafts and measure the electrical tension with the electrocope. The French Telegraph Department has appointed a committee to sink the shafts to ascertain the distribution of electrical levels. M. Willot considers that he can construct an apparatus which will meet every case.

## GEMS ARE INTERCHANGEABLE.

In the accompanying drawing is shown a new method of mounting precious stones and initial gems in a single ring. The idea is to provide a ring which may be worn on all occasions, with means for changing the jewels at the caprice of the wearer, or the jewels are made to correspond



RING WITH REMOVABLE SETTING.

with the costume to be worn on special occasions. It will be seen that the enlarged surface of the ring is cut out to form a well of circular shape into which depression the setting proper fits, being held in place by the screws at the sides and center. The different gems are provided with claw, flush or bevel mountings, the rear portion in each case conforming in shape to the depression in the face of the ring. When it is desired to change the stone it is only the work of a moment to loosen the screws and slip out the mounting already in the ring. Thus the amount of gold necessary to mount the different stones properly is reduced to a minimum, which has advantages both in the decreased space occupied in the jewel box and from the monetary standpoint.

## COMPRESSED AIR MOTORS.

Compressed air motors, in lieu of horse traction, are to be employed for the propulsion of the vehicles belonging to the Compagnie Generale des Omnibus of Paris. The station for accommodating the necessary compressing plant will develop from 5,000 to 7,000 horse power, and the air will be stored in the main receivers at a pressure of 1,400 pounds to the square inch. From these receivers the compressed air will be conveyed to the distributing stations in welded steel pipes from two inches to four inches in diameter, laid along the roadway. In order to reduce the possibility of extensive leakage, through imperfect joints, the pipes have been manufactured in 64-foot lengths. Each car carries eight receivers with a total capacity of 8,827 cubic feet, which is estimated to be sufficient to enable the car to run a journey of 7 1/2 miles without re-charging, and they can be re-charged in three minutes. Before the air passes into the motor cylinders it is heated by means of a small coke fire. Fifty-two passengers form the complement of two cars, accommodated upon two decks.

## CENTRAL ASIA'S LARGEST RIVER.

Recent reports from Dr. Sven Hedin, who is again exploring Central Asia, strengthen the impression which his previous explorations have given of the extraordinary character of that part of the world. Salt lakes, dried up lake-beds, abandoned habitations and temples and interesting people, hitherto almost unknown, are among his discoveries. He also reports that the Tarim river in Eastern Turkestan, which he has surveyed for a long distance, is the largest river in the interior of Asia. Over a part of its course the river is simply a multitude of small interchained lakes.

# Russia's Tea Trade

Interrupted by the Chinese War

Not the least serious effect of the present trouble in China has been the interruption to the tea trade. Russia has for many years done a large trade with the Chinese in this particular import. Two hundred and sixty years ago, during the reign of Czar Michael Feodarevitch, a Russian envoy, Passili Starkoff, was sent to the khan of Mongolia, Altyn khan, the "Golden Khan," as he was called, on a friendly mission, says a Moscow writer in the Chicago Daily News.

Starkoff's mission returned in autumn, and the czar's curiosity was at once aroused by the account he received of the new beverage "tacha," as it was called. He ordered it to be prepared at once and was charmed with its odor and flavor. But though the new drink found favor at court the people could not be persuaded to adopt it. They believed that it would slowly poison them, or, at least, deprive them of their wits—no difficult matter, said a wicked Swede when he heard the story.

The Russian authorities, however, were determined that their subjects should drink the new beverage and imbibe less vodka, but even then a whole century elapsed before the population of Russia was induced to use the strange Chinese drink.

By degrees the peasants began to get interested in the "Chinese herb," until at last it became the most popular beverage in the country. Vodka still holds, it is true, its ancient reign, but it is no longer solitary in its grip on the people. Tea fights hard for the throne of their affections and has done more to foster sobriety than almost any other agency.

A hundred and fifty years ago Russia entered into trade relations with China. Among all the treaties made the importation of tea was specially mentioned. When the Russian envoys reached the Chinese court they were politely requested to kneel before the emperor, but the proud orthodox boyards refused to humiliate themselves before any mere heathen.

This dignified conduct was productive of a most undignified retreat. The boyards had to put their pride in their capacious pockets, which seems to have been made for holding that unbounded element. They fled out of Peking and returned to the banks of the Neva with doleful countenances and empty wallets. It is needless to say that all treaties were broken off between the tea-producers and the drinkers of that beverage.

In 1826, however, the Russian czar determined to attempt to patch up the breach. To this end he sent his envoy Golovin with a compact body of 500 Streltzi famed for their marksmanship. Along with the envoy were also 1,400 officers and a large retinue of servants.

The czar's program, with which he intrusted his clever representative, was rather ambitious. He desired him to ratify a trade treaty with China; to establish a permanent mission at Canton; to propose a permanent legation at the court of Peking; to establish a trade with India by way of Thibet, and to secure a free entrance for Russian merchants into China.

Colovin succeeded in nearly all these objects and after his mission was over, tea became quite common once more in Russia. Peter II, extended and amplified this treaty and the Russian import of tea increased yearly.

When China again simmers down to its usual peaceful pursuits, Russia and China will do a bigger trade than ever. When the Manchuria railway is complete and Russian influence is paramount in Manchuria and Mongolia; when the predatory robber bands have been broken up and the men dwell under their own vine and fig tree without fear, the volume of trade between Russia and China, especially in tea, will increase marvelously. Of late, cheap Russian tea from the southern province has been sold at very reasonable prices with the Chinese article, but neither of them is so good as the Chinese tea.

# ESCAPE OF A LIONESS

Following is a story told of the escape of a lioness from a menagerie at Chartres the other day, which makes one think that such a gentle creature should not be kept a captive behind bolts and bars, but should be allowed the same freedom of action as the most respectable pug or pussy cat. It was evening when the lioness left the menagerie and for some hours her absence was not noticed. Meanwhile she met an old lady, who patted

her head, thinking her to be a dog. This kindly treatment evidently won the heart of the lioness, who meekly followed her for some distance. Then a hue and cry was raised, women and children, panic-stricken, shut themselves into houses and barricaded windows and doors, while a search was made for the lost inmate of the menagerie, who was at last found in a frightened condition in a carpenter's yard, and doubtless was delighted to be safely taken back again.

## CANNOT BUY IT.

Hindoo Divinity Saved from the Mohammedans Is Above Price.

It is part of the Mohammedan creed to smash the noses of all idols they may come across. When they invaded India they defaced in this way every Hindoo god. A figure of Vishnu cut in green jade was buried in the bed of the Ganges during this invasion and is now preserved in a temple in Benares. It is the only perfect image left of all the old idols, and its sanctity is such that the priests of Allahabad have offered for it its weight in gold, together with two magnificent rubies, formerly the eyes of Buddha. But they cannot buy it. An enterprising Australian millionaire named Leonard took a trip to Peru recently. He saw great flocks of the alpaca wandering on the Andes. Being a wool-grower himself, he was struck with their splendid fleece. He resolved to buy some and take them home. He found that the Peruvian government absolutely prohibited their export. He tried, by chartering a special ship, to smuggle some off, but was unsuccessful. Then the idea occurred to him of taking them out of the country eastward. He bought a large flock, engaged trusty men and had the creatures driven over the passes, 18,000 feet above the sea level, and then clean across the continent to Buenos Ayres.

This little expedition cost him \$13,500. But the long march had so weakened the alpacas that they all died on the voyage.

On the top of the prince of Wales' coronet is a small tuft of feathers. The wife of a rich Manchester cotton spinner endeavored to get some similar. She was told that there were none on the market. "I don't mind spending \$500," she said. The plume seller smiled. "They will cost you the price of a special expedition to New Guinea," he observed. Her husband was enormously wealthy and she induced him to authorize this. Last June the plume hunters returned. They had been away nearly a year and spent over \$4,000. They reported that the ferriwah, the particular kind of bird of paradise from which the plumes are taken, is extinct.

## Ohio at the Buffalo Fair.

The state of Ohio will be represented at the Pan-American exposition which opens at Buffalo next May by a plain Grecian Doric building, the plans for which have met with the approval of Gov. Nash. The building will be 34x 122 feet and will occupy a commanding site on the exposition grounds. It may be taken as a sample of what the other states will do at the great coming all-American fair, which in interest will not fall far behind many of the great world exhibitions.

# Relics of Irish Lake Dwellers

An interesting relic of the lake dwellers of Ireland has just been added to the Science of Art Museum of Dublin in the form of a crannog, or elevated dwelling. It was discovered in a bog-filled lake near Enniskillen, and measures over 100 feet in diameter. On removing the peat the piles of platform timber were laid bare. The piling and cross-timbering were ad-

mirably done, untrimmed birch trees being principally used for cross laying, while oak was used for the stouter piles. A large quantity of broken pottery was found in it, besides an iron ax of early form, a fragment of a comb and some bronze harp pegs.

The contented blacksmith is nearly always striking for wages.