Uncle Sam's Gun Shops

The extensive plant established by the United States government at the Washington navy yard is one of the attractions for visitors to the capital city. Several immense buildings are required for the accommodation of the machinery and workmen employed, and the entire work is carried on under the supervision of naval officers. The principal structure of the group of buildings is approximately 900 feet long and 100 feet wide, and is devoted to the boring, rifling and jacketing of the guns, or the complete construction of the guns proper as distinguished from the carriage and other accessories. The well-known Morgan traveling cranes and hoisting apparatus are employed for suspending and moving the heavy ordnance, and in applying the jacket thereto, and this machinery is all of the largest and most substantial type.

Trackways and beams of great size and strength extend along the sides and across the upper portion of the building to support the traveling hoists, and the suspending chains, made up of enormous links freely travel longitudinally and across the building, and upon each of the movable beams is a house or cab containing the propelling mechanism and the operator.

Gigantic lathes are used for supporting the heavy guns and operating the drills and other required tools, and the most expert workmen are employed in this important work.

The "jacketing" of the gun is a delicate operation, requiring the highest order of mechanical skill. The slightest flaw or inequality in the surface of the gun is quickly detected, and frequently more than a single trial is necessary before the jacket is successfully placed in position. The visitor observing the "jacketing" process will be impressed with the quiet discipline of the workmen engaged. The master workman directs his subordinates, and especially those in charge of the hoisting apparatus, almost entirely by signals with the head and hands, and the noisy shouting of orders is not resorted to. In fact, the discipline of the great establishment is quite strict and along naval lines.

Numerous notices are conspicuously posted to the effect that workmen are not allowed to talk to visitors.

Necessarily the quality of the metal employed in the manufacture of the huge guns, constituting the armament of our great warships, is a matter of first importance, and the materials are subjected to the highest tests known to science. As a result of the great care required in this respect, as well as in the subsequent steps involved in the development of the finished product, the cost of producing these guns is very great.

Another large building is devoted to the building of gun carriages, especially designed to support the large guns and a large force of machinists is employed to operate the great variety of machinery employed in this branch of the work.

Many curious and specially designed machines are seen in operation here for scraping, shaving, drilling and recessing the hard gun metal, and most of them are entirely automatic, requiring only the attention of a skilled workman to adjust the work and keep the machinery in perfect working order.

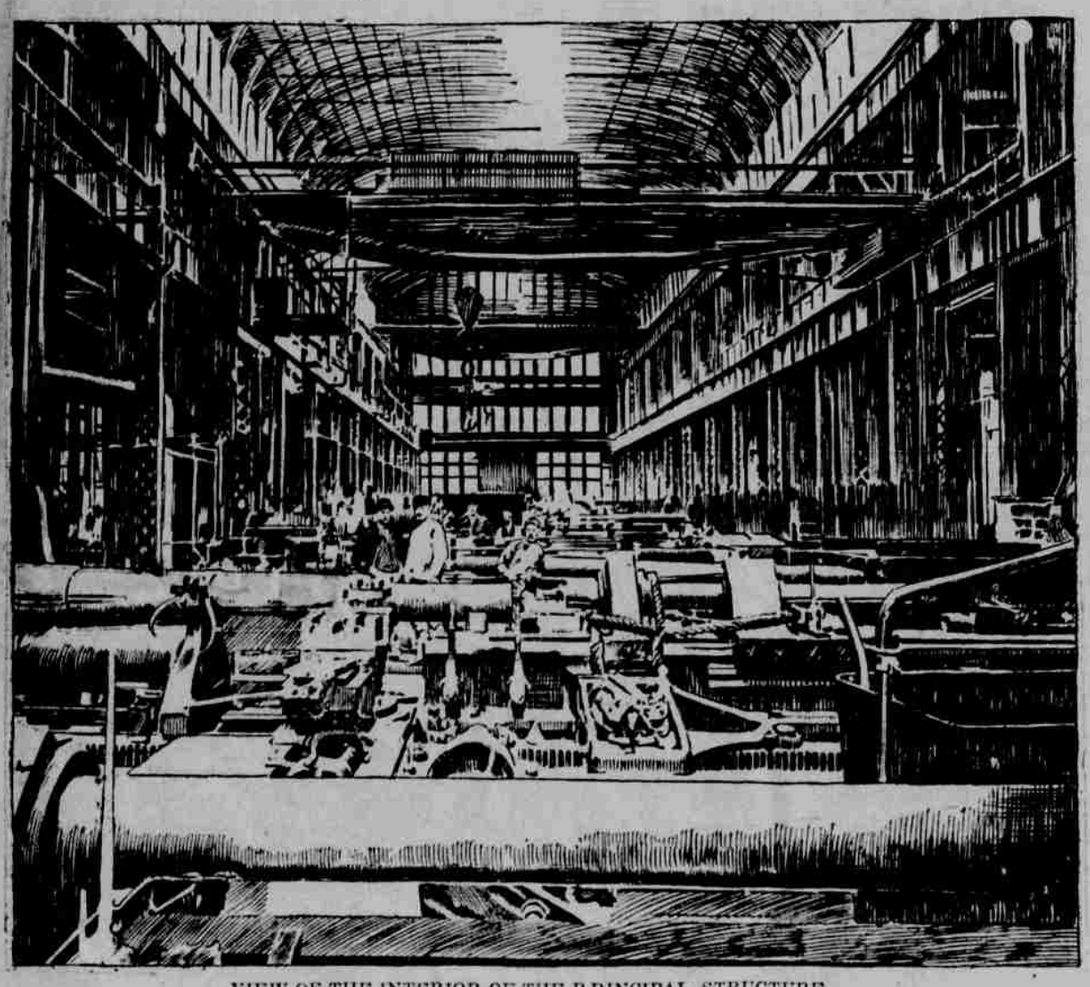
In still another separate building the work of forming and drawing cartridge cases is carried on, and this is by no means the least interesting department of the plant to the ordinary visitor. The rapid transformation of a bulky, cumbersome looking blank into a thin, shapely cylinder is an operation which attracts the eye and excites the interest of the unskilled spectator.

The array of boxes or crates of completed cartridge cases ranged along one end of the building would indicate that Uncle Sam is a firm believer in the soundness of the injunction, "In time of peace prepare for war." The formidable looking rows of cartridge cases, however, are harmless, as they have yet to be charged with the projectiles and high explosives.

As above stated, all of the work connected with the gun plant is in charge of naval officers who are specialists in the construction of ordnance, and here and there about the great workshops is seen one of these officers arrayed at this season in his summer uniform of white duck, with a cap of the same color, the spotlessness of the garb contrasting conspicuously with the rather grimy surroundings and the greasy overalls of the hand workers.

The gun shops necessitated the establishment within the yard of a railway system on a small scale, and the tooting of locomotives and the shifting of loaded flat cars give evidence of industry and labor.

The manufacture of naval guns and ammunition has greatly increased the number of the government's employes, and constitute another step in the growth and development of our national strength and resources.



VIEW OF THE INTERIOR OF THE PRINCIPAL STRUCTURE.

Anarchists Don't Prosper.

"Very few anarchists ever become prosperous and contented citizens," says a detective. "There have been some instances, though. I have in mind one man who fifteen years ago was very prominent in anarchistic circles here. He even published a little paper in the interest of anarchy. The sheet was so rabid that after the Haymarket riots it was suppressed. This man was an expert chemist and his fame had followed him from Germany, from which country he had been exiled. He was offered employment at a salary of $60 a week, more money than he had ever dreamed of making. He was frugal in his habits and soon acquired a snug bank account. With approaching affluence he turned his back upon his old associates and eventually married an American woman. To-day his name is but a memory among the anarchists."—Philadelphia Record.

Lincoln's Ancestors Made Iron.

A government report on the iron and steel industry says Abraham Lincoln's paternal ancestry was identified with the manufacture of iron in Massachusetts. The head of the American branch of his father's family, Samuel Lincoln, emigrated in 1637 from Norwich, England, to Massachusetts. Mordecai Lincoln, son of Samuel, born at Hingham on June 14, 1657, followed the trade of a blacksmith at Hull, from which place he removed to Scituate, where "he built a spacious house and was a large contributor toward the erection of the ironworks at Bound Brook" in 1703. These works made wrought iron directly from the ore. Mordecai Lincoln had two sons, Mordecai, Jr., and Abraham, who settled in Berks county, Pa. Mordecai, Jr., was the great-great-grandfather of Abraham Lincoln.

A Funny Numeral System.

The natives of Murray Island, Torres strait, have a numeral system which is based on two numbers, netat, one, and neis, two. Above two they compute by composition—neisnetat, means three, neis i neis, two and two, four. Where they get above this figure they have recourse to different parts of the body, beginning with the little and other fingers of the left hand and going from there to the wrist, elbow, armpit, shoulder, etc., on the left side, and thence down the right side to twenty-one; the toes giving ten numbers more, to thirty-one. Beyond this they are satisfied with "many."

"An Error in Nature."

Among the more interesting examples of uncommon British birds at the Zoo is a crossbill, the seed-eating fowl which Buffon stigmatized as being "an error and a defect in nature." But Buffon only dwelt upon the odd way in which the upper and lower beak cross each other obliquely, and was not aware that this apparently deformed bill is exceedingly serviceable in extracting the seeds of apples and pines, upon which the crossbill chiefly feeds. The specimen at the Zoo is of a greenish-yellow hue, but the full-dressed male bird is bright red, which color, together with its crossed bill, has been explained in a medieval legend as due to its attempts to draw out the nails from the cross.—London Express.

Eradicating Rabies.

During the whole of 1900 no case of rabies was found in England or Scotland and it is asserted with confidence that the disease which had been present for centuries has been entirely eradicated. This official statement justifies the stringent muzzling order passed by Parliament a few years ago and the vexatious regulations against importing dogs. A few cases of rabies were reported from Wales, where the regulations were not enforced strictly. For the first time in fifty-one years not a single person died of hydrophobia in England and Wales in in 1899.—New York Sun.

Harmony in House Furnishings.

Women would do well to give much thought to color harmony and circumstances rather than style when choosing house furnishings. Upon the harmonious blending of wall and floor covering, together with the woodwork, depends much of the success of the room; yet some woman, hearing that red walls "are the style," and seeing how effective a soft shade of it is with the pure black Flemish oak, straightway has it put on her walls to combine with yellow oak. How much better a gobelin blue burlap or cartridge paper would be! Then, too, often the mistake is made of having everything of one color to match, thereby causing monotony. Artistic decorators advocate old rose in rugs and hangings as a relieving contrasting bit to gobelin blue walls and yellow oak woodwork —Chicago News.

Which Is the Nobler Animal?

A group of spectators stood in front of a cigar store near Seventh and Spruce streets last night and watched an intoxicated man being led home by a red setter dog. The man was almost helplessly drunk. He held the dog by a chain. Once in a while he would grab a lamppost and cling to it with one hand while he held the dog's chain by the other. The faithful, patient dog would sit down for a while and then would tug at the chain and arouse his inebriated master. "That's nothing new," remarked the center of the group at the cigar store; "that dog takes that young man home in that condition almost every Saturday night."—Philadelphia Record.

France's Increase in Population.

France is proud of the increase in her population. The census figures for this year are 38,641,333, an increase in five years of 412,364. The increase in the preceding five-year period was only 133,819.

Etymologists declare that the sugar cane has 227 varieties of insect enemies.

NOTES ON SCIENCE.

CURRENT NOTES OF DISCOVERY AND INVENTION.

The Hygienic Care of Clothing—Neuralgic Pains and the Nerves—An Interchangeable Bicycle—A Brake for Ships at Sea.

SCIENCE OF THE NERVES—PAIN.

This term is used to designate recurring paroxysms of pain, usually affecting but one side of the face. The cause of the trouble is, of course, an important consideration, since if it can be found there is a chance that it may be removed, and its removal will eventually, although perhaps not immediately, terminate the attacks.

This tracing of the pain to its source—the point where some form of inflammation irritates the delicate nerve endings—is not always easy. One naturally looks first to the teeth, which are often at the root of the trouble; but the nose, the throat, the ear may each be the seat of disease which occasion the neuralgia; or it may be chargeable to some disorder of the stomach or to a deranged condition of the general health, although the two latter causes are more often accessory, rather than primary.

In almost every case the sufferer is compelled, from the severity of the pain, to seek temporary relief in whatever way he may.

When an attack is allowed to proceed without the employment of any means to ameliorate it, the initial dull pain increases by darts and throbbing, slowly becoming more violent and rapid until the sufferer shrinks almost as if from blows. Then, having reached its worst, it gradually or suddenly vanishes.

Heat applied externally in some form is always beneficial. It may be applied to the face and neck by means of the hot-water bag or bottle, or of the more primitive hop bag or salt bag. The important thing is to have the bag large, thick, soft and flexible, so that it may long retain its heat and fit closely to the face and neck.

Recurrence of the attacks is caused by exposure to cold and dampness, especially to damp winds, and by any exposure or injury of the nerves especially affected. It is common, for example, for an attack to recur with severity after the removal of an offending tooth, especially if its removal is attended with laceration of the gum or jaw.

Internal remedies, best used under the physician's direction, are frequently necessary. Treatment, however, is never to be confined to the relief of the pain; the sufferer should invariably be sustained with tonics and an abundance of food. A generous diet, especially in the matter of fatty food, like butter, cream and olive oil, is important.

Strength is lent to the theory that malaria frequently complicates facial neuralgia by the fact that the remedies employed against malaria almost always lessen the force of neuralgic attacks.

The chances of being permanently relieved from neuralgia are less in persons past middle age than in the young and vigorous. For this reason, if for no other, efforts to locate and annihilate the cause should be determined from the beginning.

INTERCHANGEABLE BICYCLE.

Here is a novelty in the bicycle line which will be greatly appreciated by the man who objects to riding a woman's wheel and yet does not feel rich enough to purchase two separate wheels for his wife and himself. A little study of the illustration will show the reader how the sections of the frame are manipulated to bring about the desired result. The seat and handlebars are removed in effecting the change, when the front fork is tipped out and the frame tilted over the other side up. The crank hanger is attached by means of a strong clamp

WHEEL FOR LADY OR GENTLEMAN.

and is easily set in either position. The connection being the front and rear sprockets being made without altering the length of the chain for either position. The seat and handlebar being replaced at what is now the top of the frame, the rider is ready to take a spin.

THE HYGIENIC CARE OF CLOTHING.

Many people who pay great attention to cleanliness from the sanitary point of view, who lay much stress upon the proper ventilation of their rooms and are careful to bathe often, are yet found wanting in one most important particular—that is, the hygienic care of clothing, especially outer clothing.

Underclothing goes frequently to the laundry, and is not, therefore, the text of these remarks. But many people, otherwise scrupulous in their personal hygiene, will come in from a long, hot and dusty journey, remove a warm, perspiration-soaked dress or coat, and hang it at once in a close, dark closet, or place in the same receptacle a skirt that has been for hours gathering up the filthy sweepings of streets and cars It is small wonder that the average wardrobe should give out a most disagreeable odor when the door has been closed for a short time.

All outer clothing, especially if of woolen material, should be hung up in a current of fresh air to dry and cool before being put away. Dress shields the linings of women's collars, and the bindings of skirts should be often renewed.

Frequent change of clothing will be necessary, and "dress shields" should be worn by all who have this unpleasant infirmity, men as well as women and the same suit or dress should never be worn on two consecutive days. Indeed, for every one, for clothes and shoes alike, the alternate day system is both cleanly and economical—one day for wearing, one day for airing.

WELL-DRILLING MACHINES.

To drill wells in soft or sandy soils is the work of the apparatus seen in the accompanying picture, the inventor, being a Nebraskan. Ordinarily the task is accomplished by driving the sections of pipe with a heavy sledge, but this arrangement is intended to

HYDRAULIC PIPE-DRIVING MACHINE.

remove the earth immediately below the end of the pipe, causing it to fall gradually into the ground. The apparatus consists of a suction pump, which is connected with the horizontal cylinder lying in the box, the cylinder being in turn connected with the churnlike cask on the platform. The pipe is connected in sections by means of ball joints, which allow free play as the pipe falls, and the upper end of the pipe is attached to the cask. The hole formed by the pipe is filled to the surface with water and the action of the pump in sucking the water from the hole draws the loose dirt from around the end of the pipe into the cask, which acts as a settling chamber and can be emptied from time to time. The water passes on into the cylinder and thence back to the earth again. The inventor claims that one man, with the aid of this apparatus, can sink a well to the depth of 300 feet, the pipe cutting its way gradually downward and sinking into the hole by its own weight.

THE IBIS AND ITS SUBSTITUTE.

Mr. H. F. Witherby, a recent traveler on the White Nile, describes the sacred bird of ancient Egypt, the ibis, which he says, very few travelers in that country ever see, because it only visits Egypt during the period of inundation; but the dragomans, knowing the desire of all foreigners to see the famous bird, point out to them, as a substitute, the buff-backed heron, which is really totally unlike the ibis. The head, neck and legs of the latter, all bare of feathers, are jet black, in sharp contrast with the pure white plumage of the body. "The wings are edged with black, like a mourning envelope, and from each shoulder droop green-black feathery plumes. When flying toward one the bird seems to be streaked with blood, for the wing bones are bare of feathers on the under side and the skin which covers them is of a rich vermillion color."

A "SAND-BOW."

The unusual optical phenomenon of a rainbow produced by the sun shining not on rain drops but on particles of sand suspended in the air by wind was witnessed over a part of the Great Salt Lake recently by Prof. James E Talmage, of the University of Utah The colors were very brilliant, and there was a secondary bow visible The main bow was fully double the width of an ordinary rainbow. Only a segment of it was seen. The sand was oolitic, consisting of calcareous spherules of fairly uniform size, ranging between the limits of No. 8 and No 10 shot, which are polished and exhibit a pearly luster. Prof. Talmage points out that the production of the bow must be due to reflection from the outer surfaces of the spherules, and cannot be explained on the principle of refraction and total reflection generally applied to the explanation of the rainbow.

A BRAKE FOR BOATS.

Count Posse of Sweden has invented an apparatus for stopping the headway of boats, which, he thinks, will be useful in preventing collisions between vessels of all kinds. The apparatus which has recently been tested on a large steam-launch, consists of steel plate shutters, applied on both sides of the vessel about one-quarter of its length from the stern. These can be opened and shut by the helmsman with the aid of a lever. When the launch was going at full speed, nine knots an hour, it was stopped in fifteen seconds, within half its length, by reversing the engine and extending the shutters.

PERSUADED WITH A CAMERA.

How a Young Man Won Over His Prospective Father-in-Law.

"It was simply bull-headed luck," said the young man with the red shirt waist. "Papa declared that it would be a warm day when he consented to my marrying his daughter, and as the weather record had been broken several times after he had made that remark, I was beginning to lose hope. When all-the-world-to-me went on her vacation I went to the same place and put up at the same hotel. Now, papa-in-law-to-be is an old blowhard, and it made me tired—everybody else, too—the way he bragged about the fish he caught in former years. Finally, some one hinted that it would be a good plan for him to make good and give us an example of his skill as a fisherman. He accepted the challenge and spent three days getting his tackle ready. He went alone, as he said he didn't want to be bothered by having any greenhorns along, and we waited with bated breath for him to return. Now, I am something of a camera fiend and late in the afternoon I started out to take a picture of a little wooded dell when the shadows were well down. I was making my way to the road through some thick brush when I discovered my daddy-in-law-to-be standing in the middle of the road bargaining with a small boy for a long string of magnificent fish. Quick as a flash I took a snap shot of him just as he was holding onto his pocket with one hand and digging into it with the other. I let the old man brag around the hotel for three days about the fish he had caught. Then I showed him the picture, told him if he didn't consent to my marrying his daughter I would spread it broadcast over the hotel, and pointed out where his reputation would be. He wilted, gulped hard and surrendered. He isn't a bad sort when you know how to handle him."—Detroit Free Press.

SOUVENIR CUPS LATEST.

Made of a New Metal and in Many Fantastic Shapes.

One of the latest fads to show itself in the jewelry trade is the souvenir cup of metal. This article, says the Jewelers' Weekly, is already popular in some sections of the United States. The souvenir spoon fad had its origin in Washington, D. C., and so, too, the souvenir cup in its present form, seems to have first appeared in that city a few months ago. It has now extended to other cities. In Washington the cups became a fad because that is a great tourist center. So far these cups have all been made to order in Germany and imported by one or two New York firms, who claim to have control, for this country, of all manufactures of the metal employed in this form. But if the demand expands and develops into a general fad there is every reason to expect American manufacturers to enter into competition with he German houses that now have the monopoly. The metal used is the new Kayser Zinn metal, which has come into demand lately for various uses, and the cups are sold either in their natural condition or silver plate inside and outside, or silver plate outside and gold lined. The popular shape is that of a white tumbler three and a half inches high by two and three-eighths inches in diameter at the top and one and five-eighths inches at the bottom. There are other more fancy shapes, such as a small German beer stein and a small thin goblet eight or nine inches high. On the sides are local designs which give the cups their souvenir significance.

Saved the Little Bottles.

"I have a patient who is wonderfully considerate of my interests," said a prominent physician lately. "A few weeks ago he had malaria, and I prescribed quinine for him, giving him four-grain capsules, so that he might take the drug without discomfort. He came out of his attack and a few days later called to see me at my office. Judge of my surprise when he exhibited the empty capsules and said, 'Doctor, I thought you might like the little bottles, so I saved them and brought them back.' He had emptied each four-grain dose of the bitter powder, and then essayed the rather hopeless task of washing it down with water: I couldn't do otherwise than to take the 'little bottles' from him without a word and next time I'll give him quinine in another form."—Philadelphia Public Ledger.

Takes Family in Balloon.

The archduke Leopold Salvator, who is considerably interested in aeronautics, recently made an ascent in his balloon, Meteor, accompanied by his wife and little seven-year-old daughter and Princess Theresa of Bavaria. The ascent was made in Vienna at about 10 o'clock in the morning, the Danube was crossed at about a height of 6,500 feet and the descent was safely accomplished some three hours later at Kornenburg. In Berlin a permanent international commission has been formed to promote ballooning, both in the interests of science and of sport.—Chicago News.

A Remedy.

Citizen—I'd give a clean thousand to find some way to exterminate those sparrows. Sporting Friend—I'm your man. I've got just the thing. "Out with it." "Get the Legislature to pass a game law protecting them."

A remote period is the one due at the end of a woman's remarks.

In the last century geese were raised in Russia and Poland in vast flocks, almost entirely for the sake of their quills.