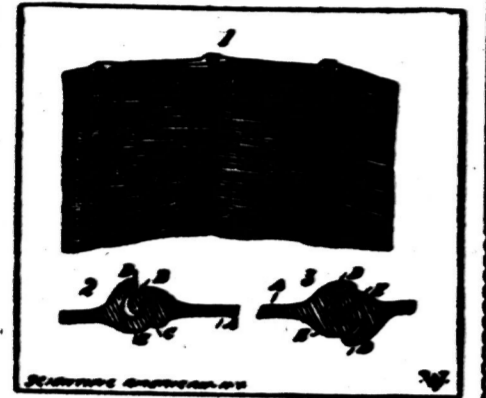


ROLLED STEEL PILING.

A New Form of Construction With Strong Flexible Joints.

One of the defects of sheet steel piling as heretofore constructed is that the interlocking edges which connect one pile with another are apt to spread open when the piles are under strain.

Fig. 1 shows a set of piles driven in a curved row. Details of the interlocking parts are given below in the sectional views, which show two different forms of piles. Each pile consists of a web, A, furnished with a pair of flanges formed to interlock with the flanges of the next adjacent pile.



ROLLED STEEL PILING.

hand end has a wide, tapering flange, B, that is bent to the form of a hook, and a short, slightly curved flange, C. The left end of the pile is somewhat similar in form, the flange D being curved to approximately the same form as flange B, but the flange D is considerably longer than the flange C.

New Surgical Antiseptic. P. A. Malgren, chemical engineer, Philadelphia, read a paper before the Mercer County (N. J.) Medical society recently on "Control of Suppurative Inflammations by Sterilization in Surgery, Leprosy, Tuberculosis, Diphtheria and Cancer."

Mr. Malgren declared that he had discovered germicidal properties in certain nonpoisonous mineral salts that had proved capable of destroying the anthrax bacillus and that had been followed by remarkable curative results in the treatment of leprosy and tuberculosis.

Rail Planing Device. A machine for planing street car and other rails has recently been accepted by several street railways in Australia and also by one of the largest steam railroads.

Graphite Replacing Lead in Paint. The growing exclusion of lead from paint on the ground of its poisonous character has led to the introduction of graphite as a substitute, particularly in the case of red lead in the painting of iron.

Removing Scale From Water Jackets. Scale usually may be removed from within the water jacket by means of a 20 per cent solution of muriatic acid.

China Furnishes Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

Chlorine Disinfects Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

Chlorine Disinfects Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

Chlorine Disinfects Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

Chlorine Disinfects Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

Chlorine Disinfects Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

Chlorine Disinfects Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

Chlorine Disinfects Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

Chlorine Disinfects Iron to America. Although it is a fact not generally known, a considerable portion of the iron melted in the cupolas of the Pacific coast plants comes from Chinese furnaces.

When Knights Were Gull.

Money Mollified crossed the old...

"Do you mind lowering the window, old man?" said Money. "This weather's exceedingly touchsome, and on these chilly evenings one can't be too careful."

"On the contrary," retorted Freddie, "one can kill oneself with one."

"Yes, but it's better to kill oneself with a draft," observed Money.

"Honest!" replied Freddie. "Look at all these modern cranks and compare them with our splendid ancestors. They don't stand comparison! And our ancestors didn't take medicines or stay in stuffy rooms or bind their necks with woolen comforters when they went out."

"I know they didn't," answered Money. "And where are they now, old chap? All dead?" - Answers.

White Lies. We sat in the moonlight—my lady and I—And looked at the clouds that went scurrying by.

At our feet spilled the waves of a turbulent sea. "As eternal as love," said my lady to me.

"As eternal as our love," I whispered. "It's true. No one else in the universe loves as we do."

And perhaps every pair up in Venus or Mars Thought that moment of lovers in neighboring stars.

Thought that moment and cared no whit more than we two who knew. For I know that I led, and I know that she knew. -Alister's Magazine.

The Frightened Cynic. Diogenes was going down a dark alley next to the statehouse.

He met three legislators. "What do you want here?" they demanded.

He lifted his light and stared at them. "I'm looking for an honest man," he said.

Then he dropped his lantern and took to his heels.—Cleveland Plain Dealer.

Furry. Mary had a little lamb—'Twas Fursten—on her coat. She also had a milk or two About her dainty throat.

A bird of paradise, a tern, And cranes made the best. That perched at jaunty angle On her collar, largely set. Her tiny boots were sable topped; Her gloves were muskrat, too; Her muff had heads and tails of half The "critters" in the zoo.

And when she walked abroad, I ween, She feared no wintry wind. At leaping water, 'twas plain to see, She had all nature "blissed." -Our Dumb Animals.

Singers, but H. Cheon. At a recent dinner in Washington given by a Democratic senator Speaker Champ Clark said of an opponent's speech delivered that day:

"It was rather barefaced. It made me think of the Rowing Green widower who put on his wife's tomb: 'My wife lies here. All my tears cannot bring her back; therefore I weep.'" -Washington Post.

Miscing. We often read sonnets in praise of the grape. And odes to the ripening corn, And grandma's farm oodinary does not escape.

But when will the poet be born Who, boldly deserting fruits, panaches and pies, Will be so exceedingly rash As to write us a sonnet or ode that applies To common bread pudding and hash? -Judge.

Went Fishing. "I notice that your garden doesn't look very promising this year."

"No; every time my husband got to digging in it he found a lot of worms, and they always reminded him of his fishing tackle." -Chicago Record-Herald.

The Spring Dream. The fly's fine on green parade. The rose knows where she's at. But give to me the panache That nod on Laura's hat. And not a lover glad forgets Her spring dream trimmed with violets. -Atlanta Constitution.

Probably Was Tired. Missionary (explaining to visitors)—Our situation was so remote that for a whole year my wife never saw a white face but my own.

Sympathetic Young Woman—Oh, the poor thing! -Boston Transcript.

Different Methods. The man who gulls you as a simple cheat becomes a roper, decorated for and near.

But if he gives you an engraved receipt He's oft accepted as a Senator. -Washington Star.

Real Hardware. "Hardware business? I thought you were selling shoes."

"I am. Mostly children's shoes. And you may be sure that they get hard wear." -Buffalo Express.

His Age. I asked the Johnson child his age. He said, "My age is eight years when I am in the house, five years when I am out." -Chicago News.

Trifling With Fate. "Is Kyanique sticky in love?" "Best over. He has proposed to Miss Gals and hasn't been accepted once." -Spokane Spokesman-Review.

A Great Food Poem. The butter. What a creature is the butter. The most useful.

OCEAN EXPLORATION.

Norwegian Expedition to Study Atlantic Sea Floor.

Sir John Murray, Dr. Johan Hjort, Professor Gunn, Dr. Holland-Hansen and Mr. Koefoed are among the members of a Norwegian expedition that will devote four months to the exploration of the deepest part of the Atlantic sea floor.

The purpose of the forthcoming cruise of the Michael Sars is to try in the great ocean the new methods and instruments which have been developed within the past few years, especially during the international fishery explorations.

It is believed that the great fishery nets and trawls which are now used for economic purposes in shallower waters can be used with success in greater depths, down even to three and a half miles.

On one occasion the Challenger, from a depth of nearly two miles with a ten foot trawl, brought up twenty-seven fish, belonging to seven species, but recently the Michael Sars, by means of a trawl with fifty-two foot headrope, brought up from a depth of over half a mile 225 species, 100 of which belonged to new species.

If these larger catching appliances can be used with success in the greatest depths of the Atlantic some important and interesting zoological results may be obtained.

Special interest will be attached to observations with Ekman's new current meter. This has been used with success by the Michael Sars down to depths of 200 fathoms. An attempt will be made by means of this current meter to measure the rate of current over oceanic shoals.

FLATIRON A 'STERILIZER. Common Household Implement Kill Disease Germs.

That the ordinary process of ironing clothes kills disease germs is the discovery made by a French scientist. A writer in the Paris Cosmos says:

The smoothing of household linen with a hot flatiron may accomplish much more than is intended by laundresses. As the iron is heated to temperatures that often exceed 130 degrees C, it has been thought that it must be able to sterilize certain fabrics and thus render hygienic service, especially in the country, where facilities for disinfection or autoclaves for sterilization are not available.

It is well known that all microorganisms are killed by the sufficiently prolonged application of a temperature of 70 degrees C, but sterilization requires 130 degrees, because the spores of certain bacteria resist lower temperatures.

Experiments have been made to show that the flatiron is capable of at least of disinfecting linen. Pieces of cloth were selected that had been in contact with children suffering from contagious disease or had been contaminated with the germs of diphtheria, pyaemia, etc.

This linen was moistened and then ironed, after which it was rubbed over with plates of gelatin prepared for the culture of microbes. It was found that no microbial colony developed.

A Radium Clock. There have been many attempts to solve the secret of perpetual motion. The nearest approach to that ideal, though its inventor makes no claim to have discovered it, is a timepiece devised by Hon. R. J. Strutt, Lord Rayleigh's son, which consists of two leaves of aluminum, an exhausted glass tube and a fraction of a grain of radium. The radio activity of the radium causes the aluminum leaves to move once a minute, and with a wireless coherer a bell rings at each movement.

For 10,000 years at least the wonderful energy inherent in the microscopic piece of radium will, it is calculated, continue to act, and nothing whatever needs to be done to the clock once it is set going.

Purification of Air. A suggestion for the purification of air in the subway is contained in a recent issue of the Electro Chemical and Metallurgical Journal, the system of Dr. R. von Foregger, who a few years ago proposed the use of fused sodium peroxide. Water added to this chemical would cause the production of sodium hydroxide and would liberate oxygen. The sodium hydroxide would then absorb the carbon dioxide of the air, and thus in addition to furnishing a fresh supply of oxygen it would purify the air as well.

Powerful Rifle Bullet. A new Austrian rifle bullet, designed to pierce the shields of field guns, has a sharp pointed hard steel core which is incased in a lead coating contained in a pointed steel outer covering. A special explosive, giving greatly increased muzzle velocity, is used with this bullet. In tests by the Austrian authorities the core penetrates steel gun shields 500 yards away, the lead and steel coverings being left behind when the projectile strikes.

New Metal Lighter Than Aluminum. A great chemical factory at Hochheim-on-the-Main, Germany, exhibited a new metal at the Frankfurt aeronautic exposition that is said to be as strong as the best aluminum alloys and but half as heavy. It is called elektron and has a specific weight of 1.9 as compared to 2.9 of the best aluminum. Bolts and bars that would ordinarily be thought of as heavy were placed on exhibition and when handled seemed as light as paper mache.

Common and Mischievous. The French chemists of microbiology have declared their disbelief in the efficacy of common disinfectants of great reputation.

DAMES AND DAUGHTERS.

Olga Nethersole, the actress, is a beautiful and big fancier.

Anne Dickinson, famous woman suffragist of fifty years ago, is living in retirement in New York City.

Miss Virginia C. Gildersleeve, the newly appointed dean of Barnard college, will continue to teach a few of her classes, including those in Shakespeare.

Dr. Olivia Salamanca is the first Filipino woman to receive a license to practice medicine in the Philippines. She was graduated last June at the Woman's Medical College of Philadelphia.

Being "built too heavily," as she explains, the Boer wife of Premier Botha declines to courtesy to Lady Gladstone, the wife of the British governor general, on ceremonial occasions, and the other Boer wives have followed Mrs. Botha's lead.

Mrs. Grubb, wife of General Grubb, former United States minister to Spain, has received from the queen of Spain the decoration of the Order of the Noble Ladies of Maria Luisa. Mrs. Grubb is the only woman in America thus honored by the Spanish order.

The Writers. Hall Caine, novelist and playwright, is an expert on architecture.

Sir Arthur Conan Doyle is reported as saying that he would "rather earn \$500 by literature than \$5,000 in any other way."

Professor Stanley Lane-Poole is the most eminent authority on Arabian history and oriental art. He is only fifty-six, but has written a score of books on his studies in the east. He was born in London, but makes his home in Wicklow.

The late Sir Theodore Martin when asked which he wrote of the famous "Bon Gaultier Ballads," among the wittiest poems in English literature, confessed that he had forgotten which were his and which were the work of his collaborator, Professor Aytoun.

Tales of Cities. There are 500 hotels and apartment houses in Los Angeles.

London has nearly 9,000 public houses. Four hundred and thirty-seven public houses have been extinguished since 1904.

New York is using five times as much milk as it did twenty-four years ago, when the dairy law took effect. The consumption now is 2,300,000 quarts a day.

Berlin's comparative freedom from smoke is due partly to the use of fuel briquettes. Thirty per cent of the coal fuel consumed in the city and suburbs is brown coal briquettes.

The Cookbook. Chopped green and red peppers with a little minced parsley make an effective addition to a white sauce for fish.

To thicken gravies for pot roasts or stews put a piece of brown bread in with the meat. When you go to make the gravy rub it up for the thickening.

A delicious fruit salad may be made from apples peeled and cut in strips with orange lobes freed from skin and seeded white grapes. Sprinkle powdered sugar over the whole and serve in orange baskets.

English Etchings. Nearly one-fifth of the deaths in England occur in public institutions.

It was in February, 1797, that the shores of Great Britain were last invaded.

A house and land in the center of London gave a rent of \$1,500 half a century ago. The ground rent of the land alone now is between \$5,000 and \$10,000.

London taxicab chauffeurs receive 25 per cent of the gross receipts of the cab, but they have to pay for the fuel used. All public motors are fitted with taximeters.

The Harem Skirt. And the world awaits Mrs. Pankhurst's verdict on the harem skirt.—Jillwauke Sentinel.

The harem skirt is said to have arrived. We suppose the scare 'em hat will be worn with it. -Spartanburg Herald.

The new harem or breeches skirt will make for peace in the household any day. The wife may "wear the trousers" without putting the husband in the henpeck class. -Brooklyn Times.

Poverty. A scientist says poverty will soon be a bygone dream, which is cheering, considering that it is a present nightmare.—Atlanta Constitution.

Poverty will be abolished, announces a professor in Johns Hopkins university. But of course there's a string tied to it. Everybody will have to go to work.—Cleveland Plain Dealer.

Aviation. Native workmen, using native material under the supervision of an Englishman, have built India's first aeroplane.

A French aviator has broken the passenger carrying record by taking six passengers on a cross country flight.

A suit of clothing which resembles an overcoat when closed, but which opens into a parachute should its wearer fall from a height, has been invented by a French chemist for aviators.

A Lively Discussion.

Showing a sense of midnight in one of his poems, a gentleman (quoted in the apt, thinking to take the laughter unawares. Miss, however, was not to be caught "napping," and before the owner of the house fully realized what was happening he was looking down the muzzle of a revolver.

"You realize that you are at my mercy?"

"Yes," replied the house owner. "And also realize that I could shoot you dead if I wished?"

"Another trembling affirmative."

"You did not hear me enter the house?"

"No."

"Well, if you had your windows fitted with one of Ketchum's new patent burglar alarms this wouldn't have happened. I am an agent for the—"

"But the house owner had screamed—Mum."

The Great Constatian. Among the ancient houses Old Peking was no slouch. He was to be envied. By confiding on his job. -Chicago Tribune.

Difficult Dabbler. "A better hen you'll not find, sir," declared the old farmer enthusiastically. "Obeys every word you say to 'em and is worth three times the price I'm asking. Try 'em, sir, try 'em."

The prospective buyer did try 'em and returned an hour later with a frowning countenance.

"What's the matter with your purchase, what?" quoth the dandy as he dismissed the farmer with a wave of his hand.

"Well, well!" exclaimed the old farmer indignantly. "And what's the matter with 'em, sir?"

"Why," returned the dandy, "the brute kept on stoppin'—stopped every twenty yards or so—cocking up his ear."

"But that's just his conscientiousness, sir," replied the farmer. "Don't you see? He's so ashamed you may say 'When' and he won't hear you that he stops to listen." -Answers.

Enthusiasm of Insuperation. You'll often find when in his pride The knacker ralls with grim election The thing he talks of is outside His usual line of competition. -Washington Star.

Unavoidable. Philanthropic Old Lady—But I gave you stipends yesterday on condition that you were not to spend it in drink, and I can distinctly smell liquor on you.

Deadhouse Dan—Lady, I am the victim of cruel circumstances. I found a bottle containing 'rot appeared for me to be worse. 'Wot was my 'error, lady, to find arter drinkin' of it all that it were whisky? -Sydney Bulletin.

Perhaps the Service is Better. The world grows better, all agree—Constitutional Democracy. The telephone, 'tis said, was first from rudeness and profanity. -Cleveland Plain Dealer.

Getting Ready. "For heaven's sake, Mildred, what have you been doing? You look as if you had fallen into a coal hole."

"It was just about so bad. Aunt Martha has telegraphed that she will be here tomorrow, and I've been hanging through the attic for her pictures." -Chicago Record-Herald.

Joy of the World. Green fields smiling to the sky, Gardens white and red. There'll be harvest by and by, Answered prayers for bread. -Atlanta Constitution.

Easy Stages. He—How did you like my speech at the dinner last night, dear? She—Oh, it reminded me so much of the time you were courting me, Fred.

"How so?"

"Why, I thought you never would come to the point!" -Yonkers Statesman.

Worried Walker's Plaid. If I had to be a minister I'd be an awful fit. I'd have to work one day a week And only loaf on six. -Spokane Spokesman-Review.

Gone to Waste. "I don't like the way they reported my speech," complained the new congressman.

"Why, they sprinkled in plenty of laughter and applause."

"Yes, but how about all them gutturals?" -Washington Herald.

A New Relation. No doubt young Algie McPherson Today is feeling quite sure. Last night he acquired a "water" That he never had had before. -Chicago News.

Already Provided. The minister was shaking hands with a new member of his congregation, a girl fresh from Sweden, and said cordially, "I would like to know your address so I can call on you."

"Oh," said the girl innocently, "I had a man." -Success Magazine.

Just Among Ourselves. And when you come to think it 'er We, men of us, amount to much. But for are jerry to the fact Except our boss, with God and such. -Frank.

Practical Education. Mother—I just got a letter from Spelman night school how he's took up Spelman in college. Father—Well, oh, oh, oh! -Cleveland Plain Dealer.

Unconscionable Thoughts. 'Twas fine to hear the rebels by And watch the Union grow. And see the butterflies at play Instead of chattering ones. -Washington Star.

SIRIES AND SONS.

Representative Gardner of Massachusetts is an expert on the Sabary question.

Ex-Senator Henry M. Teller of Colorado was formerly a schoolteacher in New York state.

William H. Crocker, leading banker of San Francisco, owns the most extensive collection of postage stamps in the world.

Senator William Alden Smith of Michigan was a newsboy and telegraph messenger in Grand Rapids for many years.

Sir Joseph Hooker, the botanist of England, and John Bigelow, historian of New York, are the two oldest living celebrities. They have each reached the age of ninety-four.

Senor M. Teixeira Gomes, the new Portuguese minister to London, is a great traveler, an author of repute, and is recognized as one of the most accomplished art critics in Portugal. He has often visited England. His grandfather campaigned with Napoleon in Russia and was in one of the French squadrons at Waterloo.

Aviation. The British government has only ten war aeroplanes standing in its credit, but negotiations are in progress for several others.

Shells with a detonating force sufficient to wreck any aeroplane within a hundred yards of where they explode have been invented for the German army.

In France the operators of aeroplanes are held responsible for damage done to persons or property when coming to the earth. In two cases such operators have been found guilty of homicide and punished, although the punishment was not as great as that for other forms of the same crime.

Dress Hints. Always shrink a new braid before sewing to skirt; otherwise the bottom of the skirt will become puckered the first time of wearing in a shower of rain.

Always begin at the shoulders in fitting a blouse. If the shoulders are fitted in the proper manner you need have no fear about the rest of the bodice.

To clean white plumes make a thin paste from gasoline and four Dip plumes and cover with paste. Lay aside to dry, then shake well, and plumes will come out clean and fluffy.

Train and Track. The government of Jamaica now operates 184 miles of railway. Of these 120 miles were built by American syndicates.

More than one-third of a million passengers carried in eighteen years and a half and not one killed as the result of a train accident is the claim made by the Long Island railroad.

One hundred and fifty-two miles of the government railway lines in Victoria, Australia, have been relaid during the past three years with American rails, 142 miles of eighty pound rails and ten miles of hundred pound rails.

Current Comment. Of every million letters that pass through the postoffice only one goes astray, and that one never happens to be a bill.—Ohio State Journal.

According to the treasury report, the per capita circulation on May 1 was \$36.55, the which report the majority of us will have to take on faith.—Richmond News Leader.

At this time of year the public again awakens to a realization that the housefly must go, that the mosquito should be exterminated and that good roads are much needed.—Washington Star.

Town Topics. In New York taxicab rates are going up, which means not so much hire—Charleston News and Courier.

Pittsburg is out for a "name Fourth." It is understood, however, that normal conditions will prevail on the third and fifth.—Philadelphia North American.

Now they are trying to demonstrate that a woman schoolteacher can't live on less than \$1,200 a year. And this is in Boston, the paradise of living on 15 cents a day theories.—New Haven Register.

Pert Personal. Mr. Morgan was given a fourteenth century feast in Italy the other day. Doubtless a lamb was served.—Exchange.

It seems that one of the best singers in New York is named Alice Tella. Orange Blossoms will change it.—Charleston News and Courier.

Mr. Jeffries has gone to Europe, probably to furnish foreigners with an idea of the dandy work of the Black Hand over here.—Denver Republican.

Electric Lights. An incandescent electric lamp of 442 candle power has been designed for lighting public places.

Despite the advance that has been made in electrical signs in the last few years, manufacturers claim the industry is but in its infancy.

Lanterns to project advertising signs upon pavements, so that he who walks is forced to read, now are made with electric lamps sufficiently powerful to operate effectively in the best lighted streets.

Advertisement for THOMAS BARGAIN Boots and Shoes, featuring a barrel illustration and text: 'You Want BARGAIN Boots and Shoes... A. RODGE JARVIS, ONT... Agent for Consumers Wallpa...'