

STANDING TIMBER.

Rule by Which to Figure Out Its Contents in Board Feet.

The contents of trees in board feet is usually figured by Doyle's rule. This rule is to deduct four inches from the small diameter of the log for slab, squaring one quarter of the remainder and multiplying the results by the length of the log in feet. For example, to find the contents of a twelve foot log twenty-four inches in diameter (inside the bark) at the small end—24 inches minus 4 inches equals 20 inches; 20 inches by ¼ equals 5 inches; 5 by 5 by 12 equal 300 board feet.

Perhaps an easier way to get at the same result is to state the rule as follows: From a sixteen foot log deduct four inches for slab and square the remainder. For longer or shorter logs the contents would be proportioned to the length. In the above case it would be worked out thus: 24 minus 4 equals 20, 20 by 20 equals 400, for a sixteen foot log. But a twelve foot log is twelve-sixteenths or three-quarters as long as a sixteen foot log; therefore this log contains three-quarters of 400 board feet, or 300 board feet. If the log were twenty feet long it would contain one and one-quarter times 400 feet, or 500 feet.

A common way of estimating standing timber is to estimate the length and the top and bottom diameters and apply Doyle's rule, using the average of both diameters and the whole length of the tree.—Rural New Yorker.

BED OF THE THAMES.

It Often Yields to Dredgers Relics of the Ancient Romans.

"Yes, sir," said the skipper of a Thames dredger as he wiped his grimy hands on the legs of his trousers, "there are many worse jobs than dredging. It is interesting and exciting work, too, for one never knows what the bucket scoops are going to pick up.

"Do we make any rich captures? Occasionally we do, but of course we bring up more mud than anything else. But, personally, I believe that the bottom of the Thames is a small gold mine in disguise, but one that it is impossible to 'work.' A 'nugget' is brought up now and again, and a 'nugget' may mean a gold watch or coin.

"Some time back a bucket scoop brought to the surface a small sack, and this sack contained a number of watches, mostly minus the cases. Evidently they had been thrown into the river by thieves, who had no use for them.

"Human bones are brought to light at frequent intervals, and so are old metal implements. Roman coins are fairly plentiful close by Billingsgate and London bridge, and some of the copper ones which have been recovered are as clean as new coins from the mint. Julius Caesar's coins and weapons have been found in the upper river and some stone age implements down by Hampton court."—London Answers.

Room For Improvement.

A certain estimable old gentleman is at all times worth listening to, though occasionally his grammar is scarcely perfect. He was dining on one occasion with the local squire, when, much to the disgust of his worthy host, a trifling error on the old gentleman's part was pounced upon and loudly repeated by the son and heir of the house. There was a painful silence, broken at length by the host.

"My son," he remarked quietly to the young fellow, "there are times, I admit, when our old friend's speech is a little peculiar. At such times you might be of mutual assistance to each other."

"In what way, sir?" asked the son.

"Well," was the severe rejoinder, "you might give Mr. X. a lesson or two in grammar, in return for which I have no doubt he would assist you to patch up the holes in your manners."—London Tit-Bits.

The Plantagenets.

A flowering English shrub, the broom plant, is called in French "plantagenet." From it the kingly family of Plantagenet took its name. It is said to have been first used as a badge by them because the Count of Anjou had himself scoured with its branches. The name was taken by Henry II., king of England, in 1154, he being the son of Geoffrey of Anjou, who wore in his helm a spray of the broom when he started for the Holy Land. The best known of the Plantagenets was Richard I., king of England, called "the Lion Heart."

Very Queen.

"My husband has been out late every evening this week, attending important club meetings."

"Yes, so has mine. They belong to the same club, you know."

"Why, how queer! My husband says he hasn't seen your husband in six months!"—Cleveland Leader.

Phantom Bubble in Sapphire.

In the National museum in Washington is a sapphire weighing nine carats that incloses a bubble, which changes of temperature cause to appear and disappear.

Dangerous.

"Bath—this is a cozy place."

"Bath—why?"

"Bath—even the rooms communicate with one another!"—Harvard Lampoon.

A Lao and a Lark.

"In India a lot of rupees is a fortune."

"And in America a lack of dollars is a misfortune."—Boston Transcript.

Trust not too much in an enchanting face.—Verdi.

BAY OF SAN FRANCISCO.

What It Once Was and What It May Become in the Future.

Few people in viewing the bay of San Francisco think of it as other than a magnificent landlocked harbor about which has grown the commercial metropolis of the Pacific coast of the United States.

Yet this harbor did not always exist, according to a report on the geology of the region published by the United States geological survey, for at one time through the depression now occupied by the bay ran a great river that drained the Sacramento and San Joaquin valleys.

This river probably flowed between the Tiburon peninsula and Angel island and then through the gorge of the Golden Gate, where at present the greatest depth of water is over 400 feet. After the river valley was formed the coast slowly sank, and the ocean entered through the Golden Gate, flooded the valley and formed the present bay.

Thus the valley occupied by the bay is really not so very different from Santa Clara and Santa Rosa valleys, and should the Pacific coast sink a few hundred feet lower those fertile valleys would form great additions to the present bay.

THEY ALL MARRY COUSINS.

Curious Custom of Some Native Tribes of Southern India.

In some parts of southern India the natives have a custom of marriage between cousins which is a result of a strange compromise between two opposite rules of succession. The natives are Dravidians, who have come under Brahmanical influence. Among the Dravidians the mother was the head of the family and all descent and inheritance came through her. The Brahmanical rule of succession is through the father.

According to F. J. Richards, writing in "Man," the matrilinear community, while being unwilling to give up its traditional custom, saw the advantage of insuring to children the benefit of the natural desire of the father—the worker and provider—to provide for his offspring. Therefore they adopted the custom of a man marrying the daughter of his mother's brother, of his father's sister or of his own sister.

In this way a community in which all property is inherited through the mother conforms to the patrilinear system and so keeps the property in the family, this, according to Mr. Richards, being the economical reason for the strange custom.

A Queen Elizabeth Joke.

Queen Elizabeth liked her jokes, and although her pleasantries were of a less sanguinary turn than her father's, she must have been even more formidable than usual when disposed to be frolicsome. A tale may be found in one of Lord Essex's letters with regard to a new dress belonging to one of her maids of honor, over the possession of which the owner had been rash enough to exhibit some elation. The young lady, it seems, was several inches taller than her majesty, hardly perhaps quite a nice or loyal thing to be. Having desired that the dress should be made over to her custody, the queen, first carefully selecting an extremely wet day, was pleased to put it on and trail it for yards behind her in the mud, the owner of the humiliated garment having to appear as delighted with the royal fun and condescension as the rest of the lookers on.—London Tatler.

The Manufacture of Plate Glass.

The casting table of a plate glass factory is about twenty feet long, fifteen feet wide and six inches thick. Strips of iron on each side afford a bearing for the rollers and determine the thickness of the plate to be cast. The molten glass is poured on the table, and the roller, passing from end to end, spreads the glass to a uniform thickness. The glass after cooling rapidly is transferred to the annealing oven, where it remains several days. When taken out it is very rough and uneven and in that state is used for skylights and other purposes where strength is desired rather than transparency. The greater part of the glass, however, is ground, smoothed and polished.

Eating Too Much.

The Lancet, the great English medical paper, says that Englishmen and Americans eat too much. It especially advises people of middle age and older to practice self restraint in the matter of food. "As the fire of life burns less fiercely and the output of energy is smaller," says the writer, "so the fuel supplied should be reduced that the system may not be clogged with ashes and half burnt cinders, whereby the activity of the whole machine is from time to time impaired and may even be prematurely arrested."

Exhausting.

"I call your attention to a most exhausting performance over near the piano."

"What do you mean?"

"One lone man is trying to hold up his end of the conversation against three women."—Birmingham Age-Herald.

Progression.

"When I was poor and got sick I sent for a doctor."

"Well?"

"Now that I'm rich I get ill and send for a physician."—Philadelphia Ledger.

Do It at Once.

Do it at once, and it is a matter of only a few minutes; put it off a month, and you have spent a month in doing it.

WORDS IN THE MAKING.

Our Language Grows by Terms Created to Fit the Occasion.

Language can be made to the library, no doubt, and in the laboratory also, but it is most often and most effectively created in the workshop and in the market place, where the imaginative energy of our race expresses itself spontaneously in swift creating the lacking term in response to the unexpected demand. Nothing could be better, each in its own day, than picturesque vocabularies like those of the old English, and the old French, and the old German, all of them American contributions to the English language and all of them examples of the purest English. Men minded to an adjective devised by Mr. Howells to describe those women who are so common in all walks of life and who are made up of only one aim at a time and of manifold anxieties at all times. Scarcely head and loon shark are the products of the newspaper office, while windjammer was put together by some down east sailor man, laborer of the word forming gift of his hand and armors who helped to carry the armada. "Windjammer," remarked Professor Gildersleeve, trained by his intimate knowledge of Greek to appreciate verbal vigor as well as verbal delicacy—"windjammer is a fine word, I grant, and so is every Anglo-Saxon compound that grows and is not made."

But all new words are not of necessity good words. Ben Jonson, who was himself a frequent maker of new words, displayed his shrewdness when he declared that "custom is the most certain mistress of language as the publicke stamp makes the current money," adding as a caution, "But we must not be too frequent with the mint, every day coining."—Brander Matthews in Harper's Magazine.

RUSSIA'S MIGHTY RIVER.

The Sluggish Volga Is Three Times as Long as the Rhine.

In Russia the rivers are large and sluggish, owing to their great length and slight fall. The Volga is the longest river in Europe. It is 2,300 miles in length—that is, three times as long as the Rhine—yet its total fall is only a little over 800 feet.

The great bogs in the Valdai hills, where it takes its rise, are only 750 feet above sea level, while Astrakhan, at the mouth, is sixty-five feet below the level of the sea.

The Russian fondly speaks and sings of it as "Matushka Volga," or "Little Mother Volga." In gratitude, no doubt, for the bounteous supply of fish, caviar and game, as well as comforts and pleasures afforded by this historic stream, which plays so important a part in the economic life of the nation. The products of Asia and Europe are carried on its waters; the two thousand odd river steamers are always busy, and the huge rafts, consisting of ten or thousands of logs, being floated or pulled down the stream, represent a small portion of the riches of Russia's inexhaustible forest lands.—New York Telegram.

Where Women Swim Best.

"The Korean women are the best swimmers in the world," said a life guard. "The Korean pearl-diving is in their hands. They swim—they don't boat—they swim out to the pearl fisheries of Quelpart, lugging baskets with them. After this swim of half an hour they dive down fifty feet and fetch up queer one shelled pearl oysters as big as babies. They dive till their baskets are full—the baskets are corked to keep them afloat—and after three or four hours' work they swim back home with their catch. The big one shelled oysters are valuable as pearl mipses and as food too. A half dozen Koreans will sit down to an oyster as gayly as you or I sit down to a broiled lobster."

Looked Bad For Papa.

William's uncle was a very tall, fine looking man, while his father was very small. William admired his uncle and wished to grow up like him. One day he said to his mother:

"Mama, how did uncle grow so big and tall?"

His mother said, "Well, when uncle was a small boy he was always a very good boy and tried to do what was right at all times, so God let him grow up big and tall."

William thought this over seriously for a few minutes, then said, "Mama, what kind of a boy was papa?"—Pittsburgh Post.

There's Room at the Top.

He entered the barber shop, sat himself down, resigned to his fate.

The barber shaved him.

"Shampoo, sir?" asked the tensorialist.

"No," replied the man, gazing at his bald dome in the reflective mirror; "shine."—Philadelphia Ledger.

Ever Experiences It?

Hokus—I feel like the oldest person in the world. Pokus—What are you talking about? You're not a day over thirty-five. Hokus—Yes, but I've just been listening to a sixteen-year-old boy tell about the things he used to do when he was a kid.—Life.

Strike a Snag.

"Do you subscribe to the old theory that the criminal always returns to the scene of the crime?"

"Not always," replied the sure enough detective. "Sometimes the extradition papers won't hold."—Kansas City Journal.

Revenge is the Sweetest Pleasure of an

subject mind.—Juvenal.

NAVAL GUN VIBRATION.

Conditions on a Warship When Heavy Firing Is in Progress.

The average civilian has a very vague idea as to the conditions inside a turret on a war vessel while heavy firing is going on.

The greatest force of the vibration from the firing of a gun is naturally just outside the muzzle, and that is outside the turret. So terrific is this vibration that if severe precautions were not taken the deck under the turret would be ripped to pieces, sheet iron doors would be wrenched from their hangings and skylights shattered. To guard against these effects the deck under the gun muzzle is reinforced with steel plates about an inch thick and skylights are taken off and replaced with coverings of armor plate.

Of course a very considerable roar and jar are felt inside the turret. Men who are looking for the refinement of precision recommend that gunners wear rubber with rubber shoe soles and heels to lessen the jar on the deck.

The air vibration, due either to firing in one's own or some other turret, has caused many cases of gun deafness. To stuff the ears with cotton wool is, of course, the commonest expedient followed by men and officers alike. There is also what is called the Cheatham device, consisting of a mixture of clay and wool. It is very flexible, can be molded to any ear and still allows its wearer to hear orders.

Gun deafness may come immediately as a result of a ruptured ear drum or gradually owing to an injury to the auditory nerve.—London Answers.

ANCIENT ROMAN THEATERS.

Augustus Made the Women Sit Apart in the Highest Places.

When Rome was in her glory and the theater most popular distinction between spectators long remained unknown. When distinctions were made the best seats were not assigned to the priests, for the drama had no such religious significance for the Romans as it had had for the Greeks, but were set apart for the more aristocratic portion of the community.

The orchestra was by law set apart for the senators. Later, perhaps after 67 B. C., the first fourteen rows back of the orchestra were, by the law of Roscius Otho, reserved at Rome for the knights, says Art and Archaeology. Similar arrangements obtained in Roman theaters outside of Rome, though in a provincial town like Pompeii as many as fourteen rows of seats can hardly have been necessary for the knights.

Augustus regulated the whole matter afresh. He confirmed the special privileges already granted to senators and to knights. He relegated the lowest classes to the highest seats and made the women sit apart, likewise in the uppermost places. It is possible that he was the sponsor also for the more exact regulations laid down concerning places of honor for magistrates, priests, etc.

The seats of highest honor were those on the tribunella. Here the editor and the emperor sat on the right side. On the other tribunal the vestal virgins had their places, and with them the empress.

The Immensity of Space.

A photographic plate exposed to the heavens in a large telescope for any considerable length of time shows nothing but a continuous blur of light, indicating that the photographic eye sees beyond the reach of human vision such a multitude of stars that every part of space is filled. One may gain some inkling of the immensity of space by supposing the photographic plate exposed upon the remotest star it now records and looking out still farther to find the heavens still crowded with millions and millions of stars, each possibly having its own planets.

The Law of the Land.

The prisoner's lawyer was making an impassioned appeal to the jury.

"It were better," he thundered, "that ninety-nine innocent men escape than that one guilty be punished."

"I cannot allow that statement to go to the jury unchallenged," said the learned judge.

"Exception," thundered the lawyer, and the jury promptly voted to acquit the one guilty.—Philadelphia Ledger.

The Silent Drama.

"Father, I want to go on the stage."

"Do not be too anxious to push yourself forward, my dear. Little girls should be seen and not heard."

"That fits in all right, dad. It is in the movies that I want to act!"—Louisville Courier-Journal.

Mathematical Marvel.

"Humble as I am," said a loud voiced apportioner at a meeting, "I still remember that I am a fraction of this magnificent country."

"You are indeed," said a bystander, "and a vulgar one at that."—Wisconsin State Journal.

The Money Question.

"Wot do they mean, Jimmy, when they say money talks?"

"I dunno unless it's the wonderful way it says goodbye to yer."—London Tatler.

Asiatic Russia.

Asiatic Russia contains 188 rivers with a total navigable length of 18,538 miles and four lakes that can be navigated for 707 miles.

Without health life is not life; it is only a state of languor and suffering, an image of death. Rabelais.

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