SCIENTIFIC SCRAPS.

The mean depth of the sea is from four to five miles.

The average of human life is about thirty-three years.

It rains three times as often in Ireland as it does in Italy.

A moderate gale travels at the rate of sixteen feet in a second.

Venus, Mars and Jupiter compare in size as a pea, a pin head and an orange.

The mean height of the Englishman is five and a half inches above that of the Frenchman.

The amount of common salt in the sea is estimated to be about five times the bulk of the Alps.

A thermometer, plunged into the snow to the depth of four inches, will mark nine degrees more heat than at the surface.

In ordinary breathing a man's chest takes in at one breath about twenty cubic inches of air, the bulk of a full-sized orange.

If the existing waters of the sea were increased but one-fourth it would drown the earth, with the exception of some mountain summits.

To estimate the distance of a storm observe how many seconds elapse between the flash of lightning and the thunder and multiply them by 1142—the number of feet sound travels in a second.

Dr. Arnott affirms that no wave of the ocean rises more than ten feet from the ordinary sea level, which, with the ten feet its surface afterward descends, gives twenty feet for the whole height.

A French surgeon mitigates pain by administrating a series of wave sounds to the affected part by means of a tuning fork and a sounding board. Neuralgia is cured speedily. The vibration is kept up by an electro-magnet.

A Clergyman's Congregation.

The following anecdote is related as having actually occurred not many months ago in a large northern seaport city in England; and we have no reason to disbelieve it.

It was a Sunday, and it was raining as it never does rain but in the vicinity of mercantile shipping on the first day of the week. The docks boasted a little church or bethel, which hoisted the union jack every Sunday morning in token that service would be held there, chiefly for sailors. The clergyman who officiated weekly at the bethel was rather later than usual on the Sunday morning in question, owing to the difficulty he had in getting a cab, the rain having caused those vehicles to be in great demand. He arrived, however, a few minutes before eleven, and hurriedly bidding the driver wait for him till service should be over, he entered the sacred edifice—to find himself alone there. Possibly seafaring people are not more prone to church-going in wet weather than their fellow-sinners who live ashore; anyhow, every seat was vacant. The clergyman was a zealous man, so he resolved to wait a quarter of an hour, on the chance of some waif or stray turning up. His patience was not unrewarded; for after the lapse of a few minutes one very wet man came slowly in, and seated himself with some hesitation on one of the back benches. Even he, probably, had only put into that haven under stress of bad weather outside, all the public houses and other congenial places of shelter being closed. Now, our parson was not only a zealous, but a conscientious man—not always the same thing—and he resolved that had he but one solitary unit instead of a congregation, he would pursue the service in full to the bitter end for that unit's benefit—at least, as long as the unit would bear it—and he proceeded to do so, and accomplished it. At the end of the liturgy, touched probably by the patient endurance of his auditor, he condescended to address him personally, telling him that since the inclemency of the weather—we are not in receipt of information on that point, but we feel sure he said inclemency—had prevented the usual attendance at the church he would forego the sermon he had prepared, and would content himself with making a "few remarks." This, however, his hearer begged him not to do, and expressed a great desire to hear the sermon; so, pleased with this evidence of intelligence among the lower orders, and gratified by the effect his eloquence was producing, he took the victim at his word, and let him have it. The text duly chosen, blossomed into firstly, secondly, thirdly, fourthly and lastly. "In conclusion" was followed by "one word more," and still the unit sat on undismayed.

After it was all over the preacher came down and shook hands with him, thanking him warmly for his attention, his gratification being somewhat diminished when he discovered the enraptured listener to be his cabman, the sum total of whose "half a crown an hour for waiting" had been materially augmented by the length of the worthy divine's discourse.—*Chambers' Journal.*

The good things of life are not to be had singly, but come to us with a mixture; like a schoolboy's holiday, with a task affixed to the tail of it.

PEARLS OF THOUGHT.

They talk most who have the least to say.

No one loves to tell of scandal except to him who loves to hear it.

Next to love, sympathy is the divinest passion of the human heart.

A man of integrity will never listen to any reason against conscience.

Sometimes a noble failure serves the world as faithfully as a distinguished success.

So long as we stand boggling at imaginary evils let us never blame a horse for starting at a shadow.

A man must reap as he sows. In a broken natural law there is, as Shakespeare suggests, "no more mercy than there is milk in a male tiger."

We do not like our friends the worse because they sometimes give us an opportunity to rail at them heartily. Their faults reconcile us to their virtues.

You have probably observed that the most difficult persons to get along with are those who are always perfectly sure that they are in the right and equally sure that you are in the wrong—particularly, as is often the case, when you know you are in the right.

Let no one suppose that by acting a good part through life he will escape scandal. There will be those even who will hate them for the very qualities that ought to procure esteem. There are folks in the world who are not willing that others should be better than themselves.

What greater thing is there for two human souls than to feel that they are joined in life—to strengthen each other in all labor, to rest on each other in all sorrow, to minister to each other in all pain, to be one with each other in silent, unspeakable memories at the last parting.

When you have learned how to live well, you will know how to die well. Be not sorry if men do not know you, but be sorry if you are ignorant of men. Not to correct our faults is to commit new ones.

Punishment by the Cangue in China.

This cangue is the main prop of the Mongolian order—the stocks, pillory and penitential cell of Kathay. It is merely a cage of crossbars, which are sometimes of iron, sometimes of heavy timber. The prisoner's body is inclosed in this cage, which reaches from his knees to his neck; his head and limbs are alone free, his hands being strapped to a bar. Now it is manifest that a criminal thus accoutered must be a prop and support of his own portable jail. A captive of Atlas, he carries about his own dungeon, and he cannot lie down to rest, but must pass whole days and nights on his feet, the poles attached to the cangue preventing him from lying down, while to the framework is fixed a placard inscribed with the wretch's name, offense and sentence. A cangue may weigh 100 pounds, or only twenty, but in any case it is a dreadful punishment, kept on as it is for periods varying from six hours to six weeks. Imagine days and nights of cramps and sleeplessness, the harassing stings of mosquitoes and other tormenting insects worrying the naked skin, and no hand to brush them away; the scorching sun, and no screen; the chilly night, and no covering; weariness, dizzy brains, limbs racked for dire fatigue, fever, delirium, the pressure of the hard yoke on the galled shoulders, the strangling collar, the agony of long want of sleep, the thirst, the shame! Men often go mad in the cangue, it is said; they fall asleep on their feet, like horses, from sheer exhaustion; they perish, and are found dead in their cages, like so many neglected wild beasts in captivity. But the cangue is a favorite punishment among the judges. —*All the Year Round.*

Filial Love.

There is not on earth a more lovely sight than the unwearied care and attention of children to their parents. Where filial love is found in the heart we will answer for all the other virtues. No young man or woman will turn out basely, we sincerely believe, who has parents respected and beloved. A child, affectionate and dutiful, will never bring the gray hairs of its parents to the grave. The wretch who breaks forth from wholesome restraint, and disregards the laws of his country, must have first disobeyed his parents, showing neither love nor respect for them. It is seldom the case that a dutiful son is found in the ranks of vice among the wretched and degraded. Filial love will keep men from sin and crime. There never will come a time while your parents live when you will not be under obligations to them. The older they grow the more need will there be for your assiduous care and attention to their wants. The venerable brow and frosty hair speak loudly to the love and compassion of the child. If sickness and infirmity make them at times fretful, bear with them patiently, not for getting that time ere long may bring you to need the same attention. Filial love will never go unrewarded.—*Amethyst.*

A MONSTER OF THE SEA.

Savage Creatures that Rise from the Bottom of the Sea Only when They are Mutilated--Interesting Information About Them.

A Gloucester (Mass.) fisherman said to a New York reporter while examining a squid at a Rockaway museum:

"I've been round the world, seen sharks, whales and big snakes, but a big squid when he's cornered is about the worst-looking creature you want to see. Generally their body is about ten feet long, looks like a grayish-white bag, with a tail like a big arrowhead. The head is small, but the eyes are about as big as a large saucer or plate, and black and staring. When you catch a glimpse of them eyeing you out from among their arms, I tell you it makes a man wish he hadn't come. The arms, ten of them, branch from the head, eight short ones about fifteen feet, and two long ones from thirty to forty, depending, of course, upon the size of the squid. Eight of them are lined with suckers, each one ranging in size from a ten-cent piece up to a half-dollar. They are like so many air pumps. In each one is a ring of bone with edges like a saw. These are pressed into you, and the air is sucked out, which, of course, forces the teeth of the saw in, and you can imagine the effect of hundreds of these flying around and striking on all sides. The long arms only have their suckers confined to the ends, which are flattened out. Between all these arms is the mouth, which has two beaks just like a parrot's, only larger, and the upper one sets into the under so they can nip a piece out of an oar blade as easy as to say the word.

"Do they swim? Yes, and backward, too, dragging the arms after them and going like lightning. Sometimes they jump right out of water and come down as slick as a flying fish. The first one I ever tackled was just above Trinity bay, Newfoundland. We saw something in near shore, and a couple of us jumped into a dory and pulled over to it. When we got near a big wave tossed us right on top of it, and the first thing I knew I got a shot of water and ink (you know they spurt ink from an ink bag) fair in the face, and by the time I wiped it off the squid was half aboard us. It flung five of its arms over, and one struck my mate on his bare arm and nearly hauled him over. I grabbed the ax and managed to cut two of the arms, when another got round my leg, and hauled me off my feet; down I went into the boat, and I believe that's the only thing that saved us, as my hand landed on a big boat hook. I lay on my back, the boat half full of water, and jammed that hook right through the ugly creature's eyes, and, as my mate had put an oar through it, it slipped into the water. All this time, mind you, it was fuming and spurting water and ink; but it was only about half a fathom of water, and I stuck the boat hook in it again. After we had bailed out the boat we made the squid fast by the painter, towed it aboard and cut it up for bait, after we had measured it. From the tip of the long arms to the end of the tail the line gave fifty-one and a half feet. We packed it in a tub that was made to hold exactly 900 pounds of cod, and it filled it. I wouldn't tackle one again like it for the proceeds of a whole season.

"Why, everywhere a sucker had struck my mate's arm it looked as though a red-hot iron had been pressed on and sunk in, and where they had been torn away the flesh had gone, too. He was laid up a month. I had a heavy pair of boots on, and the leather showed the marks, as if they had been cut with a penknife.

"Yes" (in answer to a question) "most all the Gloucester men can tell big stories about squids. Captain Collins, now one of the United States fish commission, used to run the schooner Howard, and they caught five in one day, averaging from thirty-five to forty-five feet on an estimate, and weighing about a thousand pounds apiece. Some difference between them and this monster, that we are money out on."

This account was not exaggerated, as any one may prove by paying a visit to the zoological museum of Yale college, where Professor Verrill has the finest collection of these creatures in this or any country. A few years ago they were not believed in, and the strange tales of Hugo were the only hints of their existence; but one was washed ashore on the Newfoundland coast, and fortunately fell into the hands of the Rev. Dr. Harvey, who sent part of it to the Smithsonian institute, and thus their existence became assured and credited by many who some years back classed them with the sea-serpent.

At certain seasons they are more frequent than others, and as they are only found or seen when mutilated, living at other times in the deep sea, it is supposed that they become injured in the breeding season; or perhaps at certain times parasitic animals are more frequent. 1875 was a season extremely notable in this respect, and numbers were seen floating on the surface, food for birds, or partly dead and mutilated. Others were found along the coast washed among the breakers, where they swung, hanging by their two long tentacles, which were fastened to the rocks, answering the purpose of cables to the living ship on a lea shore.

A famous place for them seems to be the Flemish Cap, a bank to the northeast of the Grand Banks. Portions of these monsters have been found in whales, that indicated animals nearly one hundred feet long and twenty-five hundred pounds in weight. These animals are not new to the geologist. Their fossil beaks and ink bags are frequently found in the strata of the recent formations, the ink being so well preserved that it was formerly used as the sepia of commerce, and a writer has penned a history of living squids with the ink of one that perished tens of thousands of years in the past. Earlier forms of the squid appeared in shells, and these fossil coverings are frequently found almost as large as a cart wheel, while some of the straight-shelled varieties reached a length of fifteen feet and, according to some authorities, thirty feet. Imagine a shell thirty feet in length propelled like a battering ram through the water, waving its snake-like arms; a fitting forefather of the giant squid of to-day, the architenthis of the scientific world.

A Trip Around the World.

Cyrus W. Field gives the outline map of his journey around the world: Newport to San Francisco; to Yokohama, 68,000 inhabitants; 28 miles by rail to Tokio, 1,000,000 inhabitants; back to Yokohama; 400 miles by steamer to Kobe, 8,000 inhabitants; 22 miles by rail to Osaka, 500,000 inhabitants, and by the most beautiful inland sea to Nagasika, 70,000 inhabitants. Then leaving Japan by steamer, across the Yellow sea to Shanghai, 250,000 inhabitants; by steamer on the China sea to Hong Kong, 125,000 inhabitants, and by river 75 miles to Canton. Then leaving China by steamer on the China sea to Saigor, 80,000 inhabitants, to Cochin China. Then by steamer on the same sea to Singapore, 100,000 inhabitants, and by steamer through the Straits of Malacca to Penang, 60,000 inhabitants, both cities of the Malay peninsula. Then up the Bay of Bengal to Manimain, 55,000 inhabitants; by the same bay to Rancoon, 80,000 inhabitants. Then leaving British Burmah by steamer across the Bay of Bengal to India, landing at Calcutta, 895,000 inhabitants. Then 390 miles by rail to Benares, 175,000 inhabitants; by rail 350 miles to Agra, 150,000 inhabitants; by rail 115 miles to Delhi, 155,000 inhabitants; by rail 800 miles to Allahabad, 105,000 inhabitants, and by rail 600 miles to Bombay, 650,000 inhabitants. Then across the Arabian sea, 1,800 miles to Arabia, landing at Aden, 5,000 inhabitants. Then 1,500 miles through the Red sea to Egypt, landing at Suez, 15,090 inhabitants; by rail 86 miles to Cairo, 350,000 inhabitants, and by rail 112 miles to Alexandria, 100,000 inhabitants. From Alexandria to Italy, sailing about 1,300 miles across the Mediterranean to Naples, 450,000 inhabitants; then to Marseilles, 320,000 inhabitants; then along the French coast by rail 20 miles beyond Nice to Mentone, famous as a sanitary resort. From Mentone to Paris, to London, to Liverpool, down the Irish channel to Queenstown, and then to New York, having gone zigzag enough to make a journey of nearly 30,000 statute miles.

Noblemen as Waiters.

A story is afloat to the effect that a foreign authoress who went to Delmonico's uptown restaurant to dine found that the waiter who came forward to wait on her was her brother. The item was shown to the manager at Delmonico's, and he was asked if there was any truth in it. He shook his head and smiled.

"Every now and then," he said, "some story of the kind is set afloat. Generally, however, it is about a waiter who is a nobleman."

"Is it not a fact that occasionally you have a nobleman among you?"

"It is not at all unlikely. There are plenty of noblemen abroad who are very poor, and are sometimes hard put to it for a good meal. In such cases they often drop their titles. If they come to this country why should they not work at waiting as well as any other business? Then there are fast young noblemen who run through their means and emigrate. They have not been brought up to any business; they are unacquainted with the ways of American life, but they know about table service, and a job as waiter is the thing they are best qualified for. Noblemen are not scarce in the old world. In Germany the title goes to all of the sons of a nobleman. I have no doubt there are noblemen jerking beer in the Bowery. We have had noblemen occasionally among our corps of waiters. There is nothing surprising in it. We see men—merchants, brokers, etc., who make a great deal of money. They live fast, spend freely and make a big figure in the world for a time, and then comes a smash and they disappear. Perhaps we may afterward hear of them working in a mine or herding cattle on the plains. There is nothing to surprise any one in finding that the waiter who takes your order is a baron or a count." —*New York Sun.*

The Levees of the Mississippi.

In Louisiana the levee system is of comparative antiquity, having had its beginning in the earlier years of the eighteenth century, and the embankments long ago came under the jurisdiction of local and State government and assumed the dignity of public works. In Mississippi and Arkansas, however, the reclamation of the swamp was an enterprise of much more modern date, having its origin almost within memory of persons now living, and at first—and, indeed, for a long time—it was exploited solely by individual effort.

The earlier settlements in the river between Memphis and Vicksburg—generally wood-yards with small appurtenant corn-fields—were made upon unusually high spots, which, although really formed by antecedent inundation, obtained, absurdly enough, the reputation of being "above overflow," because, for a number of years, they had not been actually submerged. They were prized accordingly, and the corn-fields of the woodchoppers were gradually transformed into cotton plantations, at first, of course, of very limited dimensions. Similar elevated spots were sought and subjected to culture, and before any leveeing operations had been attempted the river on both sides was dotted with settlements of pioneer planters, who sought to utilize the fertile soil by cultivation.

A very few years, however, sufficed to demonstrate the fallacy of the "above-overflow" pretension; the planter's mind relinquished the delusion that land should be high—it was sufficient that it should be dry—and the proprietors deemed it expedient to fortify against their common enemy. The water-marks left by the flood upon trees, stumps and fences were as plain as paint; these indicated the level of the water and supplied the want of engineering science. A make-shift levee of primitive style was constructed very near the river bank, because less land was thereby thrown out, and because the ground is always highest upon the margin of the river, sloping thence inland. As the plantations increased in number and approximated each other, the principle of co-operation appeared; levees were built across unoccupied lands until there were disconnected strings ten, twelve or fifteen miles long. The construction of these was far from satisfactory. The operatives were generally the plantation negroes. At that time the Irish ditchers and levee-builders had scarcely made their appearance in the country. The colored people are not usually distinguished for their skill in the use of the spade, and cannot at all compete with the Hibernian. Some years there was high water, carrying dismay to the planter's heart; some years there was low water, inspiring confidence and security; occasionally there was no "water" at all—the river did not get out of its banks, and was therefore held in contempt. In 1844, however, the Mississippi, having apparently lost all patience with this persistent intrusion upon its domains, "spread itself," to use a vulgarism singularly descriptive of the operation, and treated its unbidden guests to a first-class "big overflow," the like of which had not been seen since 1828. The river rose early and went down late; it overflowed the whole country, and filled up the entire swamp; ruined all the levees, great and small; remained at or near high-water mark week after week and month after month until late in July, and did not finally retire within its banks until nearly the middle of August. —*William L. Murfree, Sr., in Scribner.*

Abusing Newspapers.

Some people think that they are very smart when they abuse a newspaper or an editor. They forget that many papers have profited by becoming the objects of these attacks, and that some editors have thriven on being assaulted. Aside from this consideration, it should be remembered that an editor is often obliged to occupy a very delicate position. His sense of right will sometimes cause him to attack or defend a man, a business, a class or a cause at a risk of making enemies of others, only to find those in whose interests he had labored display ingratitude. Of course no level-headed editor expects to find much gratitude or charity. He must generally be content with the approval of his own conscience, and pursue the course he believes to be right, regardless of either frowns or smiles, supported by his conscious rectitude. It will all come right in the end. It is hard to be misunderstood, and to find those to whose support you have earned a right desert you to meet alone the attacks of those whom you have incensed in pursuing the course you were convinced was right, but you will thereby learn a lesson of self-reliance, and form a habit of judging entirely for yourself that will be invaluable. You will be able to tell the truth, however distasteful, and refuse to utter a falsehood, no matter how much pleasanter it may promise to make things go.—*Meriden Recorder.*

Some one has formed 1,051 English words of not less than four letters from the letters in the word "regulations."

Origin of the Railroad Bell-Rope.

In the early days of the railroad in this country the locomotive engineer was the master of the train. He ran it according to his judgment, and the conductor had very little voice in the matter. Collecting fares, superintending the loading and unloading of freight, and shouting "All aboard!" were all that the conductor was expected to do. The Erie railway was then the New York and Erie railroad. There was no railroad connection with Jersey City in 1842. Boats carried passengers from New York to Piermont-on-the-Hudson, which was then the eastern terminus of the road. Turner's, forty-seven miles from New York, was as far west as the railroad was in operation. One of the pioneer conductors of this line was the late Captain Ayres. He ran the only train then called for between the two terminal points. It was made up of freight and passenger cars. The idea of the engineer, without any knowledge of what was going on back of the locomotive, having his way as how the train was to be run, did not strike the captain as being according to the propriety of things. He frequently encountered a fractious passenger who insisted on riding without paying his fare. As there was no way of signaling the engineer, and the passenger could not be thrown from the train while it was in motion, the conductor in such cases had no choice but to let him ride until a regular stop was made. Captain Ayres finally determined to institute a new system in the running of trains. He procured a stout twine, sufficiently long to reach from the locomotive to the rear car. To the end of this string next the engineer he fastened a stick of wood. He ran this cord back over the cars to the last one. He informed the engineer, who was a German, named Abe Hammel, that if he desired to have the train stopped he would pull the string and raise the stick, and would expect the signal to be obeyed. Hammil looked upon this innovation as a direct blow at his authority, and when the train left Piermont he cut the stick loose. At Turner's he told Captain Ayres that he proposed to run the train himself, without interference from any conductor. The next day the captain rigged up his string and stick of wood again.

"Abe," said he, "this thing's got to be settled one way or the other to-day. If that stick of wood is not on the end of this cord when we get to Turner's you've got to lick me or I'll lick you."

The stick was not on the string when the train reached Turner's. The captain pulled off his coat, and told Hammil to get off his engine. Hammil declined to get off. Captain Ayres climbed to the engineer's place. Hammil started to jump off on the opposite side. The conductor hit him under the ear, and saved him the trouble of jumping. That settled forever the question of authority on railroad trains. Hammil abdicated as autocrat of the pioneer Erie train, and the twine and stick of wood manipulated by the conductor, controlled its management. That was the origin of the bell rope, now one of the most important attachments of railroad trains. The idea was quickly adopted by the few roads then in operation, and the bell or gong in time took the place of the stick of wood to signal the engineer. Captain Ayres continued a conductor on this road under its different managers until he was superannuated and retired on a pension a year ago. He died a few months ago in Owego, N. Y., at the age of seventy-eight years.

The Terrible Tragedy.

The thick thunder threatened torrents; the tempest tossed the trees, throwing their trembling trunklets topsy-turvy.

Tripping toward the town, Theresa thought: "To-night Theodore treads the tiresome thoroughfare, thinking things that—"

Thud!

The terrified truant turns to trace the threatening turmoil. There, toward the toll-gate, tramped Theodore, trying to throttle two thieves.

"Take to the timber, Theresa!" thundered Theodore.

"Tell that to timid things," thought Theresa, treading tiger-like, tip-toe toward the trio. Then, telling Theodore to throw the taller thief, Theresa, taking t'other's toga, tied through the thickness the thief's throat.

Thus terminated the terrible trouble that threatened the twain. They turned triumphantly to town, there to tell the tale. To-morrow ties them together.

The Dean's Thanks.

Some accidents seem to have happened on purpose, so pat are they. For instance:

A certain Dean of Ely was once at a dinner, when just as the cloth was removed, the subject of discourse happened to be that of extraordinary mortality among lawyers.

"We have lost," said a gentleman, "not less than seven eminent barristers in as many months." The dean, who was very deaf, rose just at the conclusion of these remarks and gave the company grace:

"For this and every other mercy, make us devoutly thankful.