UNDER THE OCEAN

Changes In the Sea Floor From Shore to Shore.

THE BIG MID-ATLANTIC RIDGE.

It Starts at Iceland and Bisects the Ocean Down Almost to Cape Horn. In Places It Rises Above the Surface, Forming Groups of Islands.

A sketch of the "landscape" of the ocean bed is given by Dr. A. E. Shipley in an article in the Edinburgh Review:

"The passengers and the crew of a liner racing over the surface of the Atlantic are apt to imagine that under them is a vast layer of water of varying depth sparsely inhabited by a few fish. As a matter of fact, the whole of this great ocean is teeming with life. If instead of taking ship we could take to the water and walk across the bed of the Atlantic to America, starting from the shores of western Europe, we should in effect be traveling through a succession of new countries. Not only would the surrounding physical conditions vary as we advanced, but the animal and plant life would vary in correlation with the altering physical conditions.

"Walking farther and farther toward the depths of the Atlantic, we should soon lose all sight of the algae, and the shallow water fish—the plaice and sole, whiting, skates, dogfish and others and cod—would give way to the megrim and the hake. The sea floor would gradually change from rock or gravel or stones to sands and ultimately to mud or oozes of various tints, their original colors often modified by the action of the decomposition of organic particles in them and on them. All these finer deposits are derived from the neighboring land and are blown seaward by offshore winds or washed down by rains and streams and carried out to the sea by rivers.

"The distance to which fine matter in suspension may be carried is very great. The Kongo is said to carry its characteristic mud as far out to sea as 800 miles, and the Ganges and the Indus as far as 1,000 miles.

"Except in the neighborhood of such great rivers a subaqueous traveler would soon pass beyond what Sir John Murray has called the 'mud line,' a line that limits the terrigenous deposits everywhere surrounding dry land. Having reached this limit, we must proceed warily, for at the mud line, at an average depth of a hundred fathoms, we shall find ourselves at the edge of the continental shelf, that rim which extends seaward to a varying distance from all land areas, the rim on which Great Britain rests. Beyond lies the continental slope, a precipice more or less abrupt and more or less high, descending by steep declines or terraced cliffs until depths of 2,000 fathoms are reached.

"The Atlantic, compared with the other great oceans, has an unusually large area of comparatively shallow water. Of its total area 27.5 per cent is covered by water less than 1,000 fathoms deep; 18 per cent lies between 1,000 and 2,000 fathoms and 47 per cent between 2,000 and 3,000 fathoms; the remaining 7.5 per cent is still deeper.

"At the foot of the continental slope lies an illimitable plain of a uniform dull, grayish buff color, flat and featureless as the desert, and only diversified by an occasional as yet uncovered rock or wreck or the straight line of a recently laid cable. This plain continues with scarcely a change in scenery or in level until we approach the great mid-Atlantic ridge. As Bruce has shown, this ridge, which roughly bisects the Atlantic, extends from Iceland as far south as fifty-three degrees of south latitude, with a slight and quite inexplicable break just under the equator. The ridge runs almost parallel with the eastern contour of North and South America, which, in turn, as the ordinary map will show, roughly corresponds with the western contour of Europe and Africa. From time to time the ridge rises above the surface of the water, as in the Azores group, St. Paul's rocks, Ascension, Tristan da Cunha and Gough island.

"Having ascended the eastern and descended the western slope of this mid-Atlantic ridge, we should again traverse plains of grayish ooze far more extensive than any level land tract known to geographers, and as we approached the American coast we should gradually pass through, in reverse order, the zones of life traversed when leaving Europe. On the eastern coast of America the slope is much more gradual than on the western coast of southern Europe and Africa."

Told the Truth.

A few days after the new farmer had purchased a horse from a thrifty Scot he returned in an angry mood. "You told me this horse had won half a dozen matches against some of the best horses in the country. He can't trot a mile in six minutes to save himself. You lied to me!" he denounced.

"I didna lie. It was in plowin' matches he took sax prizes," calmly replied Sandy.

As She Saw It.

The Mother—If you grow up to be polite, my dear, and have good taste in dress and marry discreetly I shall be perfectly satisfied. The Daughter (aged twelve)—Then I don't need an education! Isn't that lovely!—Cleveland Plain Dealer.

Tears in mortal miseries are vain.—Homer.

LEARNING A LANGUAGE.

It Is an Easier Task the Younger It Is Taken In Hand.

The time to learn a language is when you are young, the younger the better. We learn our own language as children. The older we grow the harder it is, because it means not merely learning by heart a great many words, not merely training the palate and tongue to produce different sounds, but adopting a new attitude of mind.

Nothing definite has been discovered as to the localization of faculties in the brain, therefore nothing certain is known, but it has always seemed to me and to others whom I have consulted that when you learn a new language you are exercising and developing a new piece of brain.

When you know several languages and change from one to another you seem definitely to change the piece of brain which actuates your tongue. You switch off one center and switch on to another.

You will always notice in yourself and others that there is a definite pause when the change of language is made. Now it becomes every year more difficult to awaken an unused part of the brain and bring it into active use, and to begin at twenty-three is late.—Atlantic.

FIRST POSTAL TRAIN.

It Was Tried In 1864 and Proved a Thorough Success.

The first trial of a postal car service, in which mail matter is assorted while in transit, was made in 1864 on the Chicago and Northwestern railway. The scheme was a thorough success, and railway mail service was inaugurated that year on several of the important railway lines and was gradually extended all over the United States and adopted by other countries.

In 1874 the American railway mail system was thoroughly organized on a permanent basis, with eight territorial divisions, each in charge of a superintendent subordinate to a general chief at Washington.

This service was among the first to adopt a modern classified civil service, appointment of railway mail clerks having always been made for a probationary period, permanent employment being conditioned on satisfactory service and conduct and removal based on good cause only. The service has been gradually increased and new divisions organized and is now operated on practically every railway.—St. Louis Post-Dispatch.

Swordsmen of the Sea.

The swordsmen of the sea are the sawfishes, spearfishes, sailfishes, swordfishes and the narwhal, with its spirally twisted straight tusks. Sawfishes inhabit the warmer seas, while the narwhal is a creature of the Arctic. The tusk of the narwhal is hollow nearly to the point and is spirally grooved. It uses its tusk as a weapon of defense and to plunge through the ice to breathe, the narwhal being a cetacean. Sometimes when a boat has been caught in the ice great damage has been inflicted by the inquisitiveness or blundering of this great creature, that sometimes reaches a length of fifteen feet, with a tusk of from six to ten feet in length. As a rule, however, the narwhal uses its tusk for the purpose of killing fish for food. In the castle of Rosenberg the kings of Denmark have long possessed a magnificent throne made of tusks of this cetacean. These tusks are harder and whiter than ivory.

Author Who Wrote Legibly.

No author, or any one else, for that matter, could possibly have written more legibly than Francis Thompson. He wrote frequently in pencil in a careful round hand that would have put a schoolboy at the top of his writing class. His copy was always "good" for the compositor, which was fortunate, for there was always the greatest difficulty in getting him to correct the proofs of his reviews. I have the manuscript of one of his later poems, which a child of ten could read with ease, though it is written partly in ink and partly in pencil and carefully stuck together where bits have been snipped out with scissors. He was probably the only writer of genius who used penny exercise books as manuscript paper.—London Spectator.

Tennyson and a Telescope.

Sir Herbert Beerbohm Tree in "Thoughts and Afterthoughts" tells this tale of Lord Tennyson: The poet was invited to a certain country house, and all the neighboring luminaries of the county had been invited to meet him. After dinner his host asked whether he would like to look at the stars. Tennyson took up the telescope and, forgetting all else, gazed for twenty minutes at the wonders of the heavens. "Well, what do you think, Mr. Tennyson?" inquired his host. "I don't think much of our county families," Tennyson replied.

Tumblers.

Drinking glasses called tumblers owe their name to the fact that they are the successors of the little round silver bowls, so perfectly balanced that, which ever way they were tipped about on the table they tumbled into position again and there remained with the rim upward.

Fairly Lazy.

"Is Jones lazy?"

"Lazy's no name for it. Why, he'll go into a revolving door and then wait for somebody to come in and turn it around."—Judge.

He that comes unbidden will sit down unasked.—Irish Proverb.

RAILROAD COMEDY

Methods of Operation In 1852 Seem Laughable Today.

QUAINT RIGHT OF WAY RULES.

On the Western and Atlantic When Trains Met Between Stations and a Dispute Arose the Conductors Decided Which Train Had to Back Down.

A most interesting exhibit of the early days of railroading in this country has been found by the Railroad Age Gazette. It is a schedule for passenger trains and rules for the conduct of enginemen and conductors on the Western and Atlantic, which was at the time and still is owned by the state of Georgia. The table is dated March 1, 1852, and was issued by William M. Wadley, superintendent, father of George D. Wadley, the latter for many years manager of the Central Railroad of Georgia.

The schedule shows a picture of an engine and cars at the top. Under it the numbers and names of the stations, the times for arrival, the times for departure and the time taken to run between stations as well as remarks about passing sidetracked freights are all carefully tabulated.

In the rules for enginemen and conductors are many which seem quaint in this age of colossal railrouding. Of course the road had only one track, and rule 14 for passenger conductors shows that there must have been some dispute when trains met as to which train had the right to keep on its way uninterrupted. This rule says:

"As a general rule, when trains meet between stations the train nearest the turnout will run back. Any dispute as to which train is to retire is to be determined at once by the conductors without interference on the part of the enginemen. This rule is required to be varied in favor of the heaviest loaded engine or worst grades if they meet near the center."

Rule 7 gives the conductor directions for reporting on the number of passengers who are paying and the number of ministers of the gospel who were to be charged half price when on business connected with their calling. The same rule indicated that the governor of the state and the general superintendent of the road were the only individuals who had a right to give passes.

The conductor was ordered to inspect the running gear of his train at every station and in rule 13 was admonished never to leave Atlanta or Chattanooga without the mail or without first sending to the postoffice after it. Rule 17 says that a train stopping at any station at night must invariably be run on the turnout so as to leave the main track clear, and that strict watch had to be kept in all cases where a train stopped at night.

In the regulations for passenger enginemen there are a number which seem almost humorous in this period of railroad management. For instance, the engineman was instructed that if his train killed any stock and threw the cow or cows in such a position as to endanger the safety of the next train he was to stop his train and see that the track was cleared.

Passenger trains were not to exceed the speed of their schedule except when behind time, in which case the speed might be increased three miles an hour generally. In passing turnouts (the turnout evidently was the switching track) the speed had to be diminished to six miles an hour.

Rule 6 might be put in force today with good effect and to the delight of a much jolted traveling public. It reads:

"In connecting and in starting with his train the engineman will be exceedingly careful in the management of the throttle so that the cars may not be injured or the passengers annoyed by the sudden violence of the start."

This paragraph is found at the end of the regulations for enginemen:

"For any violation of the above rules, for running off at turnouts, for killing of stock by daylight and for all other irregularities the general superintendent will impose such fines as he deems just and called for by the nature of the offense."

The freight trains took two days to make the 137 miles between Atlanta and Chattanooga. The stops at the stations varied from ten to sixty minutes. One of the rules for freight conductors about keeping a certain distance from the trains ahead of him and behind him shows that there must have been a delightful uncertainty about the provisions for changing meeting points in case trains were delayed. It is evident that there was no telegraph communication along the line, although this was eight years after Morse had demonstrated that he could send messages over the wire from Washington to Baltimore. Several months before Charles Minot also had made use of the telegraph in ordering the operation of trains on the Erie.

Now, What Did He Give Her?

A particular old gentleman, pulling something out of his soup that should not have been included among the other ingredients, thus addressed his cook: "Josephine, I am much obliged for your thoughtfulness, but next time kindly give it to me in a locket."—London Tit-Bits.

Never suffer youth to be an excuse for inadequacy nor age and fame to be an excuse for indolence.—Benjamin R. Haydon.

SLIDES FOR LIFE.

Tibet's Perilous Bridges and the Way They Are Crossed.

In Tibet they have not yet progressed far beyond the primitive. Especially when it comes to engineering the Tibetans are at about the stage reached by Europeans six centuries ago. At that time in Switzerland they used a long cable and swinging carrier for the transport of heavy weights, even of cannon from one mountain to another a little lower down.

Now, in Tibet they do not try to build bridges across the Mekong river, but where there are high cliffs a cable is stretched to the other side of the river, and for a trifling fee the person who wishes to cross clings to a thick bark carrier and slides down, holding up his feet at the point where the water nears the perilous bridge.

If he wants to cross back he must go farther up or down the river to a point where another cable is stretched from a high cliff to the other side, and again he performs the "slide for life."

This may not be a very comfortable way of crossing a river, but it is easier than swimming across, especially if there are rapids in the stream, and it is the favorite and cheap way of building bridges among the Tibetans.—New York World.

MAKING OF MAPS.

The First Attempt Was by Anaximander About 560 B. C.

Anaximander, a pupil of Thales, about 560 B. C., sketched the first map. It was in the form of a disk. Democritus of Abdera, about 100 years after, with a wider range of knowledge, drew a new map, giving the world an oblong form, showing extension east and west rather than north and south.

The first application of astronomy to geography was made by Pytheas of Marseilles about 326 B. C., he having made the first observation of latitude. Hipparchus of Nicaea, 162 B. C., first determined latitude and longitude. Marinus of Tyre, about 150 B. C., was the first to make use of Hipparchus' teachings in representing the countries of the world.

Claudius Ptolemy of Pelusium, Egypt, about 162 A. D., was in reality the first scientific mapmaker. Notwithstanding errors in boundaries and locations, the method was correct. The Romans contributed nothing to mapmaking. No improvement was made in it from the time of Ptolemy until the thirteenth century, when a map appeared in Italy which was constructed with the aid of a compass.—Exchange.

Old Time Football.

In the twelfth century London enjoyed football. Fitz-Stephen, clerk to Thomas a Becket, tells how after dinner the youths of the city would "address themselves" to football. These sportsmen were fastidious in their way. The scholars of each school had a ball peculiar to themselves, as had, indeed, most of the particular trades. The fathers of the players, too, were "as youthful as the youngest," for, "their natural heat seeming to be revived at the sight of so much agility," they sprang from their stands into the arena. In later days, too, the excitement of the game has been known to infect the spectators. Somebody wrote of a game in 1598: "These two men were killed by Ould Gunter. Gunters sonnes and ye Gregories fell together by ye years at football. Ould Gunter drewe his dagger and broke boothe their heads, and they died boothe within a fortnight after."

Lightning Shuns Women.

Statistics appear to show that men are more likely to be struck by lightning than women, more than two men being killed by it for every woman. But a London journal points out that the man's occupation is more likely to take him into the open when lightning is about. It has been observed, however, that in a group equally composed of both sexes lightning seems to prefer the men, and we may theorize at pleasure as to whether it is the comparive height that does it or some protection afforded by the woman's dress or a difference in conductibility between the sexes. The fact that children are seldom killed by lightning supports to a certain extent the first of these theories.

Let Down the Blind.

A youngster had been to the theater, and upon his return his uncle asked him how he liked the play.

"Oh," he replied, "the play was all right, but I didn't see nearly all of it!"

"Why, how did that happen?" asked his uncle.

"Because," answered the youngster, "the roller must have been broke, for the window blind fell down two or three times"—London Express.

His Idea of It.

"George Washington," read the small boy from his history, "was born Feb. 22, 1732, A. D."

"What does 'A. D.' stand for?" inquired the teacher.

The small boy pondered. "I don't exactly know," he hesitated. "After dark, I guess."—Exchange.

Can't Do Both.

"Pop, you an' ma have got me guessin'."

"What's the matter, son?"

"Ma tells me to always speak the truth, an' you tell me to always be polite. Now, which shall I do?"—Houston Post.

All human history is the history of reform. The evolution of the race, physically, morally or mentally, has been thus accomplished.—Anon.

ONE WAY TO VISIT

The Tarahumare of Mexico Has a Style All His Own.

NEVER STARTLES HIS HOST.

He Is Too Politely Deliberate For That and the Compliment Is Faithfully Returned—Ceremonies In the House Have a Rather Abrupt Ending.

For a barbarian the Tarahumare is a very polite personage. In his language he even has a word "reke," which is the equivalent of the English "please", and which he uses constantly. When speaking to a stranger or leaving a person, he draws attention to his action by saying, "I am going." As he grows civilized, however, he loses his good manners.

In spite of this he is not hospitable; the guest gets food, but there is no room for him in the house of a Tarahumare. A visitor never thinks of entering a house without first giving the family ample time to get ready to receive him. When he approaches a friend's home good manners require him to stop sometimes as far as twenty or thirty yards off. If he is on more intimate terms with the family, he may come nearer, and make his presence known by coughing; then he sits down, selecting some little knoll from which he can be readily seen.

In order not to embarrass his friends he does not even look at the house, but remains sitting there gazing into vacancy, his back or side turned toward the homestead. Should the host be absent the visitor may thus sit for a couple of hours; then he will rise and go slowly away again. But under no circumstances will he enter the home, unless formally invited, "because," he says, "only the dogs enter houses uninvited."

Never will the woman of the house commit such a gross breach of etiquette as to go out and inform him of her husband's absence, to save the caller the trouble of waiting, nor will she, if alone at home, make any statements as to his whereabouts.

The Tarahumare never does anything without due deliberation; therefore he may for a quarter of an hour discuss with his wife the possible purport of the visit before he goes out to see the man. They peep through the cracks in the wall at him, and if they happen to be eating or doing anything they may keep the visitor waiting for half an hour.

Finally the host shakes out the blanket on which he has been sitting, throws it around himself, and, casting a rapid glance to the right and left as he goes through the door, goes to take a seat a few yards distant from the caller. After some meditation on either side the conversation, as in more civilized society, opens with remarks about the weather and the prospects for rain.

When this subject is exhausted and the host's curiosity as to where the man came from, what he is doing and where he is going is satisfied, the former may go back to the house and fetch some meat and pinole for the traveler. The object of the visit not infrequently is an invitation to take part in some game or foot race, and as the men are sure to remain undisturbed they generally reach some understanding.

A friend of the family is, of course, finally invited to enter the house, and the customary salutation is "Assaga!" ("Sit down.") In this connection it may be noted that the Tarahumares in conversation look sidewise, or even turn their backs toward the person they speak to.

After having eaten, the guest will carefully return every vessel in which the food was given to him, and when he rises he hands back the skin on which he was seated. Should occasion require the host will say: "It is getting late and you cannot return to your home tonight. Where are you going to sleep? There is a good cave over yonder."

With this he may indicate where the visitor may remain overnight. He will also tell him where he may find wood for the fire, and he will bring him food, but not unless the weather is very tempestuous will he invite an outsider to sleep in the house.—From Carl Lumholtz's "Unknown Mexico."

Knew Where She Went.

An attorney was cross examining a witness.

"You say you left Boston on the 16th?" queried the lawyer.

"Yes, sir," replied the witness.

"And returned on the 28th?"

"Yes, sir."

"What were you doing in the interim?"

"I never was in such a place," she replied indignantly, with heightened color.—Boston Herald.

What She Did.

Mrs. Exe—While I was going down town on the car this morning the conductor came along and looked at me as if I had not paid my fare. Mr. Exe—Well, what did you do? Mrs. Exe—I looked at him as if I had.—Boston Transcript.

Worth of Newspapers.

The careful reader of a few good newspapers can learn more in a year than most scholars do in their great libraries.—F. B. Sanborn.

Valor is stability not of legs and arms, but of courage and the soul.—Montaigne.

BUILD OF THE BABY.

Normal Weights and Measurements Up to Three Years of Age.

A baby should weigh at birth seven pounds, at three months eleven pounds, at five months fourteen pounds, at one year twenty-one pounds, at two years twenty-six pounds and at three years thirty-one pounds. The length of a baby at birth should be twenty and one-half inches, at three months twenty-two inches, at five months twenty-three and a half inches, at one year twenty-eight inches, at two years thirty-two and a half inches and at three years thirty-five inches.

Its chest measure at birth should be thirteen and a half inches, at three months fourteen and a half inches, at five months sixteen inches, at one year eighteen inches, at two years nineteen inches and at three years twenty inches.

Some babies are built very small, and, if well, even if below these figures, there is no cause for worry. But if a baby is about normal size and does not come up to these figures its diet should be carefully looked into, as evidently it is not being properly nourished.

The growth of baby's body is very important. See that the teeth come in properly and that the legs grow straight and strong. The babies should be carefully watched and developed naturally.—Rural Farmer.

MAGIC OF A MAGNET.

Makes a Chain Rigid Enough For a Man to Climb It.

A Berlin correspondent of the Scientific American describes an interesting experiment that was made at the works of one of the large German manufacturing firms with one of their lifting magnets.

A chain, fastened to the ground and carrying an iron ball at its free end, was raised to a vertical position by the approach of the great lifting magnet suspended from a crane.

The attraction of the magnet was so strong that the chain remained in a perfectly vertical position. A grown-up workman climbed up the chain without disturbing its rigidity in the least. The chain seemed to float in air. The magnetic pull on the ball was greater than the gravitational pull on the man.

This remarkable experiment shows the enormous power of attraction exerted by the lifting magnets that are used in iron and steel works to carry about iron material of every description. The magnets enable the operator to seize iron material at any point desired and convey it to any other point within the range of the crane. Incidentally the use of lifting magnets has greatly diminished the risk of accidents in the moving of heavy masses of iron.

Subtle Advertising.

A successful hotel manager pointed to the advertisement of a hotel at a fashionable resort. The advertisement read:

"Special rates to single men."

"The proprietor of that hotel," said he, "deserves to succeed. He lays in his advertisement a subtle trap for mothers with marriageable daughters. They read the advertisement and they conclude that, given lower rates at this hotel, single men will be plentiful. They therefore decide that there is the place undoubtedly to take their daughters."

Then, laughing, he concluded:

"These mothers quite correctly believe that as far as their daughters' chances of matrimony are concerned the more the marryer."—Washington Star.

Not Immune.

Mrs. Martin met an acquaintance one morning while out shopping.

"How is Mrs. Callaway, that lives near you?" asked Mrs. Martin. "Of course you know she has a child very ill with scarlet fever?"

"Oh, yes, indeed," replied the other. "I know it, but I don't dare to go and see her."

"Why not?" inquired Mrs. Martin. "There is said to be no danger of taking the fever, you know, after one is sixteen."

"Oh, but, then, you know," replied the other woman, "I'm so young in my feelings!"—Lippincott's.

Novel Sight.

A young woman from the east was conversing with a Kentuckian about tobacco and tobacco raising. She was very pretty and a good conversationalist, and the young man from Kentucky was vastly interested in her until she gave him a sudden shock by announcing, "I should love to see a tobacco field, especially when it is just plugging out."—Argonaut.

Before and After.

When a man is in love with a girl he holds her hands so tightly that it would seem he is trying to keep her from getting away. After they are married awhile she has to hold his coattails to keep him at home.—Florida Times-Union.

Poor Papa.

"Karl, let's play papa and mamma. I'll be mamma."

"Oh, no. You're much too stupid for that. You be papa.—Fliegende Blatter.

A Coming Man.

Griggs—Then you don't look upon Sharpe as a coming man? Briggs—No, but I would if I was in charge of the penitentiary.—Boston Transcript.

After weariness come rest, peace, joy, if we be worthy.—Newman.