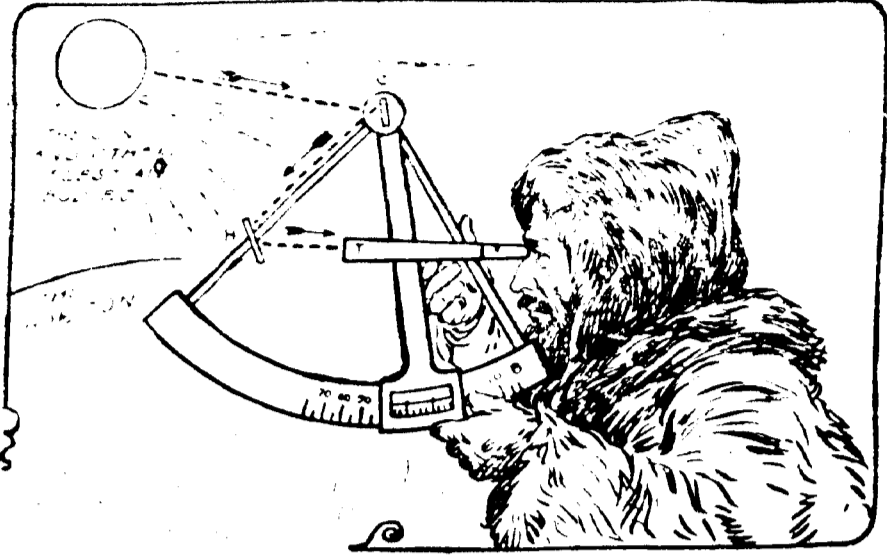


How Arctic Explorers Make Use Of Sextant



The sextant whose service in polar trips has been reported by the explorers is an instrument small enough to be conveniently held in the hand, and is equally well adapted for measuring the altitude of celestial objects, in order to obtain the latitude and local time, or for measuring the angle between the moon and sun, or the moon and a fixed star, to ascertain the longitude.

It is called sextant because the measure is recorded on an arc of 60 degrees, one-sixth of a circle, says the New York World. It consists of a frame, usually of metal, stiffened by cross braces. The arc at the bottom of the frame is marked off with double the number of degrees actually measured.

This is done because the fixed and movable glasses attached to the instrument give a double refraction of the objects observed and thus form an angle with reference to each other equal to only half the angular distance between such objects, one of which is seen directly and the other by reflection. The arc of 120 degrees thus records the actual angle.

Midway on the frame on one side is a telescope and opposite, on the other leg of the frame, is a glass transparent in the upper half and silvered in the lower half. Both the telescope and the glass are firmly attached to the frame. At

the top of the frame is a mirror C in the figure, which is movable by means of an arm R.M. in the figure to which it is fastened. C is called the index glass and the arm R.M. revolves around it. At M is a shifting scale for making fractional measurements and called a vernier.

The observer takes the instrument in his hand and holds the telescope horizontally. Looking through the telescope he may see the horizon through the horizon glass H. Then, if wishing to bring the sun into line, he manipulates the mirror C as a child handles a bit of looking glass for the purpose of catching the sun's glare and throwing it into the eyes of a companion. He turns the arm R.M. until the mirror C catches its reflection and throws it back to the silvered surface of the glass H. When the sun is thus made to coincide with the horizon the section of the graduated arc over which the arm R.M. has passed indicates the measure of the angle in degrees, which is exactly determined by the movable fractional scale or vernier.

Arabian astronomers are credited with having used a sextant as far back as the year 905, with a radius of 50 feet 9 inches. The modern instrument was invented independently about 1730 by Thomas Godfrey of Philadelphia and Capt. Hadley of the British navy.

THREE SOLID DURING NIGHT

Mounting Tower's Sailed
A Few Hours by the
Tense Cold

Three solid during the night... The phenomenon was on that I have never before experienced... When we were in the water of this stream, floating over the great mud flats and rushing through the narrow channels, made a descending run gradually, but almost perceptibly the current decreased, while, worn out after a hard day, we fell asleep.

A few hours later, when we awoke, a deathly silence prevailed, and on looking out, to my intense surprise, I found that the rushing torrent of the previous night had been transformed into a solid mass of ice! In this region of extreme temperatures I had on other occasions seen torrents frozen, but never under such startling conditions. On looking round, we found that everything we possessed was also frozen solid, including our saddle of mutton, which was merely a block of ice. We were ravenous, but we got no satisfaction from gnawing at lumps of rock which ought to have been a succulent joint, and so, despite our hunger, we had to content ourselves with a little tea—to make which we melted ice—and a few biscuits.

EXAMPLE OF PERFECT FAITH

Mexican Lover Believed Sweetheart's Story Before Evidence of His Own Eyes.

For the past week the physicians in charge of one of the sanitariums here have been dealing with one of the most puzzling and obstinate cases of eye trouble ever brought to their notice, declares a Puebla (Mexico) correspondent. Their suspicion that the subject was nothing the matter with his eyes was confirmed to-day by a naive confession made by the patient.

The man's name is Estanislao Ruiz. He stated that he lives at Cholupia and shortly before coming here he was shocked one evening, upon passing the house of his novia, to see her kissing a very dandy dressed stranger through the bars of her window. Fearing that he might cause a scandal by interfering, he retired quietly, and later in the evening returned to speak to the young lady about it. She denied the matter emphatically.

AT THE HALF-CENTURY MARK

Youth is eternal to him who believes in eternity. To me youth means any where from eight onward. I was an exceedingly old person at eight and I trust I violate no confidence when I confess a youthful exuberance now that I have bumped against the half-way post. Fifty is a splendid time for youthful expansion; one's fancy still retains all its ingenuity while one's judgment is bettered by experience. When sitting on the 50 milestone the vane of man's vision points southward to the past and northward to the future with a minimum of oscillation. Rancorous thought and splenetic expression give way to quieter nerves and calmer view, and the mellow lighted vista of the years that have gone sotten the heart of the youth of a half century of years.—John Philip Sousa in the Circle.

Dresden China.

Judging by your recent note, writes a correspondent, it seems that the geographical knowledge possessed by girl typists is about on a level with that possessed by the dame who represents the postmaster general behind the counters of our suburban post offices. Having occasion recently to telegraph funds to a town in Germany, it became necessary for the clerk to consult the post office guide. After a long and fruitless search I ventured to suggest that she was not likely to find the town I wanted in the section devoted to the celestial empire, where she was looking. "Not under China" she retorted superciliously. "You said Dresden, didn't you?"

Labor That Aids the World.

It is true that all wealth comes from labor, but not necessarily from labor by the hands. The thinkers of the world have added inestimably to its development. It was a portrait painter who invented the telegraph, a college professor who produced the telephone, and the list might be extended almost indefinitely. It is well that today, with all our indulgence in rest and play, that we remember that it is intelligently directed energy of whatever kind which makes man better and helps along the world to the millennial dawn.

Problem.

Knicker—It is said that you can be well educated with a five-foot bookcase.
Flatterer—What would you get out of a folding bed that looked like a bookcase?—Puck

DAY OF REST AND RETICENCE

Philippine of Both Sexes... A Time of Enjoyment—The Market Woman

It is the women who market the produce. Early every morning, long lines of these women, with their baskets on their heads, are seen straggling along the streets toward the capital city where markets are held, says a Manila correspondent.

Content and happy, they walk through the streams and the mud, and only stopping to get a fresh light for their cigars from some one of their number or some one whom they chance to meet. Once at market they chat, smoke, laugh and chatter for hours over a few small tomatoes, some green squash, a live chicken, eggs, fruit, sugar or anything they happen to have, and toward noon they straggle home, having had a good visit and sold or exchanged their wares.

Sunday is the one really strenuous day for the Filipino. It is the big market day when people come from all the surrounding country, and it is the time when cock fights are allowed. Men spend a good share of their time during the week in training their pet roosters, and on Sunday, early and late, they can be seen going to and from the pit, carrying their game-cocks under their arms.

Excitement runs high and their joyous shouts can be heard for a long way. Some women attend the fights, but most of them do the double duty of attending mass and then patronizing the market, which is just across the street from the church. All day Sunday they are active and excitable but the next day they settle back into their quiet, uneventful lives.

SUBTERFUGE NOT A SUCCESS

Crosby Doesn't Know Whether Wife Detected Trick or Really Was In Unfishy Mood.

Crosby had always been inclined to conservatism in household expenses, especially in the matter of his wife's dress bills, relates a writer in the Sunday Magazine. His wife went so far as to say that he was penurious.

She had been in need of a new boa for a long time, and after she hinted that her happiness would never be quite complete till she had one, he at last consented to make the purchase. He went into a store and picked out two, one of which was a cheap imitation affair, and the other a fine expensive one.

Taking them to his office before going home, he changed the price marks, the expensive tag on the cheap boa and vice versa.

His wife examined them for a long time very seriously indeed, and then said, "Now, dear, the expensive boa is a beauty, and it is really very good of you to allow me my choice. Some women would take it without a word; but really I don't think we can afford the more costly one, and besides, dear, I think the cheap one the more stylish too. Why, Cros, dear, what's the matter? Are you ill?"

But dear old Cros had made his getaway into the night where he could kick himself as hard as he felt he deserved. But what he would like to know, is this: Did his wife happen on the more expensive boa by pure accident, or—

Possum Hunting in Queensland.

Among the ways of earning a living in the colony of Queensland the collecting of fur skins combines considerable profit with a fine, adventurous life in the open air in the "bush," the term which describes all country parts, plain, hill and forest away from the settlements.

The possum is protected by the government of Queensland till May 1, on which date young men issue forth for a campaign against the wily animal whose skin makes such beautiful carriage and other rugs and forms the material for ladies' furs all over Europe. Formerly shooting was resorted to, but now trapping is found to be the most efficacious means of securing a good bag. Most of the trappers work in couples or employ a native, and snares of thin wire are used.

Holy Days.

Dr. Hale and the late Bishop Huntington of New York were fast friends. The latter had been a Unitarian and his shift caused a sensation. The Episcopalians have saints assigned to the various days in the year. When an Episcopalian minister writes a letter on any day for which there is a saint, he always writes the name of the saint at the close of the letter instead of the date. Bishop Huntington learned all these things quickly, and began to practise them at once. The first time he had occasion to write to his old friend, Dr. Hale, after joining the church, he placed "St. Michael's Day" after his signature. A reply from the doctor came, and after his name he had written in a full, round hand, "Wash day."—Christian Register.

The "Austrian Lip."

The thick and prominent underlip that has long been characteristic of the house of Hapsburg was dubbed the "Austrian lip" many years ago. This feature was derived from Cymburgia, daughter of Zierovitz, duke of Masovia, and uncle of the then king of Poland. She was noted for her great beauty and unusual strength.

The house of Hapsburg owes not a little of its strength of character and imperialism to this remarkable woman.

WOMAN SMOOKED LINED LONG

Mary, First of Her Majesty, Robbed First of Her Sex to Use Tobacco Explored.

Mary, first of her Majesty, was the first woman to smoke tobacco. She was a great favorite of King James VI and I, and she was the first woman to be crowned queen of Scotland and England.

The first of her day, she was a great favorite of King James VI and I, and she was the first woman to be crowned queen of Scotland and England.

Mary was a great favorite of King James VI and I, and she was the first woman to be crowned queen of Scotland and England.

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ARE USED TO BEING CROWDED

Passengers on New York Street Car Sit Close Even When It Is Not Necessary.

The woman with a sense of humor smiled. "It is funny," said she, "how content some people are to sit jammed together in the cars."

"But they can't help themselves," protested her companion.

"I know, but I refer to the times when they are not obliged to occupy the same six inches with their next neighbors. When a crowded car begins to thin out, most people expand, but some forget to. I have seen the women who have been shopping squeeze into a seat beside a laborer at the rush hour, and just as often as not, she continues to tinkle his nose with her plumes clear up to Harlem, after the car is half empty and to rest her bundles on his lime-coated overalls.

"One night, quite late, away up town on a Broadway car, a young man and young woman sat propped together midway of a long empty seat. There was not another passenger left in that side of the car. They paid no attention to each other, and I supposed that they were too tired to talk. It was quite a shock to my calculations when the young man got off and left the girl sitting apathetically in the empty seat. I had estimated them as first cousins at the furthest."—New York Press.

Scales for Dyspeptics.

"When I got my last prescription made up the druggist showed me a pair of pocket scales for weighing food," said the sallow complexioned man. "He said he could tell by the scales I was taking that I would have to be mighty careful about the quantity of food I ate, and he urged me to buy the scales so I could be sure not to overeat. They were the first scales designed especially for dyspeptics I had seen. They cost two dollars. No doubt they could be used for weighing other things, but that druggist offered them only to customers whose digestion was out of order. The scales were small enough to be carried conveniently and they registered rations light enough to starve a canary. I did not buy, but the druggist assured me that many persons who are on a strict diet have provided themselves with pocket scales on which they weigh every bite they eat."

Worst Pest Than Brigands.

On the highways of turbulent Catalonia one might expect that the chief danger to the traveler would be brigand. By no means! The greatest pests are the small children, who accost one at every turn. Treated with the utmost consideration by their parents—they are never corrected. It is said, in any circumstances whatsoever—they track the foreigner, with the irritating pertinacity of the mosquito. And, like the mosquito, they seek blood, crying:

"I have neither father nor mother! 'Cinc centimos!" And the grubby hands shoot up into one's face.

The Consoling Volume.

There was a backward student at Balliol who, for failure to pass an examination in Greek, was "sent down." His mother went to see the master, Dr. Jowett, and explained to him what an excellent lad her son was. "It is a hard experience for him, this disgrace," said the old lady, "but he will have the consolation of religion, and there is always one book to which he can turn." Jowett eyed her for a moment and then answered: "Yes, madam; the Greek grammar. Good-morning."

Why Mary Recovered.

"John, I don't want you to grieve too long when I am gone."
"I shall have to look sorry for a week or two, Mary, just for the looks of things, but I shall perk up after that and begin to take notice. Don't you think Widow Jinx is a fine looking little woman?"—Houston Post.

THE BATTLE COMBAT TO VICTORY

Strongly Opposed... A Time of Enjoyment—The Market Woman

The battle combat to victory... Strongly Opposed... A Time of Enjoyment—The Market Woman

The battle combat to victory... Strongly Opposed... A Time of Enjoyment—The Market Woman

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AS THEY DO IT IN ENGLAND

Family Inherited Postmaster's Post Through the Department Official's Didn't Know It.

Forty years before, as quite a boy, Jones had left a little town in Kent. Now, on the first long vacation he ever had since he was visiting his childhood scenes. He had remembered that the postmaster's name was Pengelley, and he had remembered that he was a kindly old man. There wasn't the slightest probability he thought, that the postmaster was still alive, but his acquaintance with the former incumbent might smooth things a little with the new one, so that the whereabouts of people to whom he had been directed would be made known.

"What's become of Mr. Pengelley?" he asked, interrupting for a moment his majesty's letter assorter.

"I am Mr. Pengelley."

"Perhaps you're his son?"

"Yes, my father's name was Pengelley, too," drawled the Englishman. "I mean the postmaster."

"No, do it."

"Was your father, postmaster 49 years ago?"

"My word, no! That was my grand father. You see, our names are all alike, and the post-office department doesn't know but that the first one is alive. We inherit this job, don't you know. And my wife's just presented me with a son. There was no backing over his name."

Music, Birds and Snakes.

Exceptional love of music would redound to the credit of any other living creature as indicative of refined taste, but in the malignant snake even this artistic attribute is a mark of degeneration. Our own Quakers, for example, take up and endorse the diatribe of Epiphanius against the flute-players. Observe the figure that the player makes in blowing. Does he not bend himself up and down to the right hand and the left, like unto the serpent? These forms hath the Devil used to manifest his blasphemy against things heavenly, to destroy things upon earth, to encompass the world, capturing right and left such as lend an ear to his seductions? And so on. But not a word do we hear in condemnation of the unregenerate birds that carol heedlessly even while the minister is painting the horrors of an unmentionable place.—North American Review.

Cheering Her Up.

Islington, which is no longer rural, was once so esteemed by medical men that they sent their patients there after severe illness. Many also went there in the last stages in the forlorn hope that the invigorating air might restore them to health. A story related by Dr. Abernethy turns on the latter class of visitors. One of his patients engaged some rooms in Islington, and casually remarked to the landlady that the banisters on the staircase were very much broken. "Lor' bless you, mam," said the landlady, "it's no use to mend them, for they always get broken when the undertaker's men bring the coffins downstairs."—London Chronicle.

Intelligence in the Kitchen.

The higher the intelligence and the broader the education of the woman in the kitchen, the greater the pleasure and satisfaction in household duties.

The woman who cooks intelligently is commanding great and mysterious forces of nature. She is an alchemist behind an apron. At her command food constituents that are indigestible, unpalatable and even poisonous, are subjected to chemical changes that render them an epicurean delight. The woman of real intelligence and powers of imagination finds in her well-ordered kitchen a source of deep and enduring interest and pleasure.