



YOU HAVE SIX EARS.

THE ORGANS OF HEARING ARE A WONDERFUL SET OF MACHINES.

They include Two Hammers, Two Anvils, Two Stirrups, Six Canals, Two Small Shells, Six Drums, and several Other Curious Utensils.

The hearing apparatus is far more wonderful than most people have the slightest idea of. It is a marvelous collection of instruments for receiving, magnifying and recording sounds or vibrations, as the learned term them.

What you do when you speak to a friend is to throw the air into vibration. Your vocal organs strike the air, and the impulses thus caused reach the trumpet shaped bits of flesh and gristle you call ears. You have altogether six ears.

The flaps which are stuck on to each side of the head are the outer ears. Besides these there are the middle ears and the inner ears, all of which lie in cavities in the bones of the head. All that the flaps do is to collect and concentrate the vibrating currents of air, so that they may strike the ear drums.

These latter are really the middle ears. The outer ear narrows as it enters the head and ends in a ring. A membrane is stretched over this ring, much in the same way as a piece of parchment is stretched over the head of a drum.

The ear drum is a true drum, for it can be tightened and slackened by means of levers made for that purpose. The tightening and slackening are done quite automatically to suit the various sounds.

This is how it is tightened: In the middle ear are four tiny bones, the most peculiar looking bones imaginable. The biggest is a little odd shaped bone called the mallet. It looks like a lilliputian version of a lobster's claw. Minute muscles are attached to it, so that it may act as a lever to increase or diminish the tension of the drum skin. One muscle relaxes the membrane, another pulls it taut.

The four bones form a chain to connect the drum skin of the outer ear with the drum skin of the inner ear and so to conduct the sound. The next bone to the mallet is the anvil, then come the spherical bone and the stirrup, which looks exactly like its namesake, but it is by far the most important of the four. By means of this stone one can hear, in a fashion, even if all the others be gone.

A bony, gristly tube joins the ear-drum with the back of the mouth at the side of the soft palate. Hence the four bones are always in a bath of air, quite naked, as it were. It is owing to this that people who are somewhat deaf are able to hear better when they listen with their mouths open.

Now we come to the inmost ear, which is made up of three parts. The first one is called the vestibule, or hall, and it has a drumhead to which the chain of little bones is attached.

The hall leads to the other parts, both of which consist of tortuous tubes along which the sound passes. One part is made of three semicircular canals. The other is shaped exactly as a snail's shell. All these make up a peculiar labyrinth, and all are completely filled with a curious fluid. Their walls are lined with the soft, pulpy nerves of hearing which communicate with the brain. Owing to these complex and winding cavities, a great extent of nerves is exposed for the reception of sound.

Now let us see what happens when somebody says "Hear!" to you. The air is thrown into vibrations, which spread out and out until they touch the side of your head. There the fleshy flap on one side collects and magnifies the vibrations.

Down the ear funnel they pass until they reach the membrane of the drum of the ear. They strike on the membrane, which adapts itself to them. Then the vibrations are communicated, through the bones in the middle ear, to the membrane covering the entrance to the labyrinth.

If you keep your mouth wide open the air vibrations pass direct to the little bones. The impulses of the air are not interrupted by first having to strike the membrane of the drum; that is all the difference.

People could easily converse with their ears sealed up. If the two speakers each held an end of the same piece of hard wood against their teeth even the faintest whisper could be understood.

You will see from this that what are commonly called the ears are not essentially necessary to hearing, after all.

Well, however the vibrations are received, they finally strike against the membrane covering the entrance to the hall of the labyrinth. Thence they make the fluid which fills the labyrinth vibrate. These vibrations act on the fibers of the auditory nerve, the fibers which coat the inner ear. Along this nerve the impressions are communicated to the brain. In this manner the sensation of sound is produced, and you know that somebody said "Hear!" to you.

The Tepid Bath. A tepid bath at about 90 degrees Fahrenheit, taken just before retiring, in a tub where the whole body except the face is immersed, is an excellent substitute for sleep, says Henry Bennett Weinburgh in Perfect Health. To be exact, he says it is the only substitute known to science for nature's sweet restorer. "I have known cases of prolonged and chronic insomnia to be cured by this form of bath. Sleep, with the exception of the heart beats, is intended for perfect rest. The bath above named will come near enough producing this result to answer many months for sleep in cases of insomnia."

BEATING A "SCOOP."

The Way President Hayes Once Saved a Newspaper Man.

President Hayes was generally counted as a cold man by the correspondents, but there is one dignified writer of "brevier matter" who, when a Washington correspondent, had need to find a vulnerable joint in the president's armor and succeeded completely.

Then, as now, great pains were taken to prevent premature publication of the president's message. At the same time it was the custom, which it is not now, for certain newspapers to print a forecast of the message a few days in advance. One year the correspondent of W. S. Story's Chicago Times learned late on a Saturday night that the Chicago Tribune man had sent an abstract of the message by mail for publication on the following Monday morning. As he knew that to be beaten on so important a matter meant discharge by the irascible Story, he put in all of the following Sunday trying to secure an abstract for himself. At about noon he got so close to a printed copy that he began to have hopes, but they were dashed to the ground when the custodian thereof refused an offer of \$1,000 for the document.

Finally, at about 3 o'clock, the correspondent met a senator, a great friend of the president, to whom he poured out the complete story of his troubles. The senator didn't believe he could be of service, but finally consented to take the correspondent with him to call upon the chief executive.

At first the president was adamant, though he would not deny that the Chicago Tribune's man had stolen a march on his rival. At last, being convinced that failure meant the close of his career's journalistic career, Mr. Hayes said:

"I can't send you to any one for a copy of the message, as you suggest. You can't be helped by any one but me, and I am crowded for time. But, under the circumstances, I will outline the message briefly on condition that you keep the source of your information a secret. You must not take notes, but write wholly from memory. I may repeat the exact phraseology of the message in part and that wouldn't do in your dispatch."

Then for the space of twenty minutes the president talked steadily, the correspondent listening meanwhile as if his life depended upon good hearing and good memory. The result was a column and three-quarters in the Chicago Times the next morning and promotion instead of discharge for the newspaper man. — Louisville Courier-Journal.

PROVERBS UP TO DATE.

Better swallow your good jests than lose your good friend.

Sweet are the uses of adversity; bitter are the uses of prosperity.

The rising generation owes much to the inventor of the alarm clock.

If vanity were a deadly disease every undertaker would buy fast horses.

The dead march is not necessarily the one that the musicians have murdered.

When the last trumpet sounds, some woman will ask Gabriel to wait a minute.

The oil of insincerity is more to be dreaded than the vinegar of vituperation.

A good field of corn is one thing; a farmer doesn't care to have crowded over.

A walk may improve your appetite; but a tramp will eat you out of house and home.

The man who cannot be beaten is he who holds his head up when he has been beaten. — Everybody's Magazine.

Mary Had to "Nail" Her Man.

Mary was a domestic treasure, and when she gave her mistress a month's notice on the plea that she was going to be married there was weeping and wailing in the household.

"Oh, Mary, wouldn't you be willing to oblige me by putting off your marriage for a week if you can't nail 'em when your notice expires?" asked her distressed employer.

"Well, ma'am, I wouldn't mind waiting myself," was the reply, "but men is different. If you don't nail 'em when they're ready for it you can't nail 'em at all." — New York Press.

Their Rewards.

"Who lives in that little cottage down there by the lane?"

"There dwells the man who wrote the poem that made Beasley's shaving soap famous."

"And who resides in the splendid mansion on yonder hill?"

"Beasley." — Chicago Record-Herald.

A Great Kindness.

Van Schmidt—I don't believe old Kerr Mudgerson ever had a gentle impulse.

Fitz-Bile—That's where you're wrong. He's been very kind to at least one woman, I'm sure.

Van Schmidt—How so?

Fitz-Bile—Well, isn't he a bachelor? — New Orleans Times-Democrat.

A Boston Expedient.

Fidgett—Really, now, do you think there is any way whereby a man can retain the respect of his children?

Midgett—He might send them away from home as soon as they began to take notice. — Boston Transcript.

Get a Life Customer.

"You haven't charged me nearly as much for half soiling these shoes as I expected."

"No, ma'am. We charge according to the size of the shoe." — Chicago Tribune.

Your troubles are not interesting unless you are rich. — Schoolmaster.

Those who complain most are those who are complained of. — Henry.

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