

Put a tuning-fork in connection with another tuning-fork of the same pitch, and its strength is increased. The same effect is produced by holding a tuning-fork over the mouth of a bottle, if you apply one that vibrates in time with the air in the bottle. The sound, called the song of the sea, that is heard when a shell is held to the ear, is the vibration of the air in the shell. The music of the mighty organ is caused by the vibration of air in the pipes. Sound is the sensation we experience from vibrations that reach the ear. These vibrations are constantly passing through the air, but other matter may convey them. When a tree is felled, if a person slightly scratches with a pen-knife on one end of the tree, another person, with his ear pressed at the other end can distinctly hear the sound, which in this instance is conveyed through the tree itself.

But what of the statement that two sounds can create a silence? At first thought, as some one has suggested, it seems as absurd as to say that two loaves can make no bread. But when we reflect that sound comes from vibration of the air, we can believe that when two vibrations of opposite systems unite, they sometimes increase sound; and, sometimes, just destroy each other, so making silence. It is with sounds or vibrations of the air, exactly as in the case of the waves of the sea. One wave may join another in such a manner as to ride triumphantly on its crest; or it may just fill up the other's trough, and so stop the motion of both. At one point on the coast of Ireland there is no tide, because the waves of the Irish Sea and the Atlantic Ocean unite in the latter way.

It has been found that the Davy Lamp, invented for colliers to take into the mines is not always a safety lamp, for a very loud noise, like that of a blast in a coal mine, may cause such an increase of vibration that the flame and the outside gas will meet.

At Manchester, in Massachusetts, there is a wonderful singing beach; for, owing to some peculiarity of form, the vibration of the sand on this beach is keenly musical.

There is also on the Peninsula of Mt. Sinai a hill called Gibel Nakus, or Mountain of the Belly, where musical tone are distinctly heard, and have excited much curiosity, and have given rise to various speculations concerning origin. Some years ago a Lieutenant Newbold, of the Madras army, visited this curious hill. Setting off from Wadi Tor, "after two hours' riding, and a short walk of half an hour, he reached the place, which he described as a bell-shaped hill, from three hundred and fifty to four hundred feet in height. On its western side, which faces the Red Sea, is a slope of about eighty feet, covered with a very fine quartzose sand, varying in depth from

five or six inches to as many feet, according to the form of the sandstone rock, which it covers. This is the spot from which the mysterious sounds issue. Not the slightest noise was heard; but, their Arab guide, desiring them to wait still at the bottom of the slope, began to ascend the slope, sinking to his knees at every step. The travellers soon heard a faint sound, resembling the lower string of a violoncello slightly touched; and being disappointed at the result, determined to ascend themselves, in spite of the intense heat of the sun, and the extreme fineness of the sand. On reaching the summit, they sat down to observe the effect. The particles of sand, set in motion, agitated not only those below them; but, though in a less degree, those all around them, like the surface of water disturbed by a stone. In about two minutes they heard a rushing sound, and then the musical tone above alluded to, which gradually increased to that of a deep, mellow church bell, so loud that it recalled the rumbling of distant thunder. This occurred when the whole surface was in motion, and the effect upon themselves, the travellers compared to what they supposed might be felt by persons seated upon some enormous stringed instrument, while a bow was slowly drawn over the chords. They descended while the sound was at his height; and soon after it began to lessen with the motion of the sand, until, at the end of a quarter of an hour, all was perfectly still again.

THE BRAIN.—During sleep, almost all the organs rest. The heart, popularly supposed to be in perpetual motion, is at rest six hours out of the twenty-four, the respiratory organs eight, and the other organs more or less. The brain alone is constantly employed during wakefulness, and for it sleep was formed and made needful to its preservation. It is true that sleep does not give the brain a total recess from labor; imagination and memory are often vividly active during sleep, whole histories being imagined in a night; but enough rest is obtained for the renovation of the brain, and that which has been torn down during wakefulness is to a certain extent rebuilt. Sleep is a most wonderful power—often stronger than the will; as in the case of the sleeping soldier—and more mighty than pain, as when sick persons and tortured prisoners sleep in the midst of their suffering. No torture, it is said, has been found equal to the prevention of sleep. The amount of sleep needed differs according to the constitution and habit. Big brains and persons who perform much brain labor need a large amount of sleep. Children need more sleep than grown people, because construction is more active than decay in their brains.