

pitch would mean smaller whistles and less steam consumption.

"It is a matter of common observation," he continued, "that locomotive whistle on different roads, and frequently on the same road, differ greatly in pitch and in quality. When one hears a whistle, frequently he can not tell whether it is a locomotive whistle or a factory whistle. He becomes so accustomed to hearing such sounds that they may call forth no mental reaction whatever. If all locomotive and traction car whistles were of one pitch and others were prohibited from using whistles of that or near that pitch, the human ear would soon come to recognize that tone and instinctively associate it with danger. Not only this, but the volume of sound required to produce a mental stimulus would be greatly lessened."

NOISES CHANGED INTO MUSIC WHEN BORKEN UP BY TREES

Stories of fairy music in the forest, of haunted waterfalls, and mermaids singing near the seashore, long thought mere figments of the imagination, may have a sound basis in fact. In "Science", Dr. Alexander Forbes of the Harvard Medical School reports numerous cases in which trees seem to have separated discordant shouts and noises and given back echoes in musical tones.

"In every case," he says, "the source of the sound - waves on a beach, roar of a river, exhaust of motor boat or discordant human voices - was one in which many pitches were present. Something in the surroundings, usually trees, must have separated the sounds according to pitch, placing those of one pitch in one place and those of another pitch elsewhere. In this respect the phenomenon appears analogous to that of white light being broken up into pure spectral colors by a prism."

This reflection or absorption of sound waves of different pitches, Dr. Forbes explains, is only rarely observed. Sometimes the phenomenon is distinct and clear in one spot, yet a few paces backward or forward only the ordinary noises are heard.

The frequent association of trees with these musical echoes is thought to be due to lack of uniformity they present as a reflecting surface for the sounds. Each tree apparently sends back part of the sound, and this reflection is broken up into innumerable parts on account of the varying element of distance.

READING REFERENCE - Miller Dayton C. The Science of Musical Sounds. New York, Macmillan Company, 1922.

French engineers are adopting an American invention, and building engines to operate with mercury vapor instead of with steam.

An apparently practical plan has been developed to use the tidal power of the Severn river of England and Wales at a cost of 30,000,000 pounds sterling.
