

we now have 144 reflections requiring 1.5 seconds to become inaudible. But sanitary conditions in a hospital bar carpets, draperies, and other sound absorbing apparatus. The ideal solution of the problem lies in the wall surfaces of the room," the investigator continued.

As a practical demonstration of the sound absorbing qualities of the new plaster, the physicist has plastered two rooms, one with the ordinary plaster, and the other with a thickness of one-half inch of the absorbing plaster. The difference in the acoustics of the two rooms is pronounced. In the first there is a reverberation of sound for several seconds, and in the second, all sound is "dead".

A small portable pipe organ, arranged to speak at a constant wind pressure, is used as a source of varying the pitch. This has with it a specially designed chronometer for measuring the duration of audible sound.

The collected data show that the absorbing efficiency of the plaster is much greater for tones that are higher than 512 vibrations per second, which is, said the physicist, similar to the crying of patients in pain, or of infants, in the upper range of the pitch scale. The material seems to be particularly fitted for the walls of hospitals.

"The acoustical properties of the plaster depend upon its porosity. Its surface, texture, and hardness is that of other rough finish plasters", he said, "A new paint has also been invented to go with the plaster."

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#### MUSICAL TALENT MEASURED BY TESTS

Scientific methods of measuring musical ability have been developed to the point where they can be regularly used in schools of music or public schools. Dr. Carl E. Seashore, of the State University of Iowa, told the American Association for the Advancement of Science at a recent meeting. The Eastern School of Music, at Rochester, has recently adopted this system of selecting or rejecting prospective students, said Dr. Seashore.

To indicate the reliability of scientific tests that measure a sense of rhythm and other factors in musical ability, he told of experiments at the Carnegie Institute of Technology.

Music teachers were asked to select 20 pupils, ranging from very superior to very inferior, and to agree upon their rating. Without knowing about this rating the experimenter made measurements of musical talent in the students, and evaluated them in the light of his common sense judgment as a musician. His judgment was found to be practically identical with that of the teachers.

"In other words," said Dr. Seashore, "an expert in these measurements may take an unknown child and within an hour evaluate the degree of musical talent with such confidence that he is in practical agreement with those who have taught the pupil a long time."

Other uses for a yardstick of musical talent were indicated by the psychologist:

"In war," he said, "the success or failure of the German submarine program depended on our ability to locate the submarine accurately. A man with a sensitive ear was needed to use the measuring device which located the submarine. By use of certain measures of musical talent we could pick with absolute certainty the man who had the good ears, and on such choice countless human lives and millions of dollars might depend."

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#### YOUNG CHILDREN HAVE LONG MEMORIES, TEST SHOWS

Children of two to six years learn better when they are taught a certain lesson on alternate days than when they are drilled on it every day. This evidence on the complex process by which human beings acquire knowledge was presented by Miss Julia A. Kirkwood, of the Iowa Child Welfare Research Station, before the American Association for the Advancement of Science recently.

It was found that if a child once learns to pair off a set of blocks and pictures without making mistakes, and then relearns the "block game" a year later the relearning will not take nearly so long.

"There have been very few investigations into the problem of how young children learn," said Miss Kirkwood. "If children are to be taught efficiently there must be thorough scientific knowledge of the process by which the child learns, and this can be acquired only from experimental results obtained by placing the child in a controlled learning situation, and by analyzing carefully the results obtained."

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#### SAYS MAN WAS ALWAYS A BIPED

Man stood on his own legs, weak-kneed though he was, from the time of his origin, for as Dr. Dudley J. Morton of the department of surgery of Yale University, told members of the American Anthropological Association at a recent meeting, fossil evidence shows that an erect posture has existed in the anthropoid ape stem as far back possibly as the Oligocene.

"Of all the great apes, the chimpanzee, the gorilla, the orang and gibbon, the slender and agile gibbon is the only one who has preserved good proportions between leg and body, although this fact is obscured by its long strong arms," Dr. Morton said. "It is an erect, running tailless biped, both in the trees and on the ground. The other apes have long powerful arms, shoulders and chests, weak pelvis and short legs, which show that they are predominantly treeclimbing.

Tree life may have enabled animals to develop the upright posture, Dr. Morton explained, for all animals which are familiar with tree life, or come from comparatively recent arboreal ancestry, assume erect squatting position easily and habitually. But all the arboreal animals but the primates, to which man belongs, are nevertheless essentially quadrupeds, for their thighs are not extended as in man.

"The ancient apes walked better than the modern ones," Dr. Morton said. "The antiquity of the erect posture in this line of creatures and the recognition of the physical changes that hand locomotion in trees will bring about, show that the quadruped posture must have resulted from the enfeeblement of the legs from under use and the bad balance of the upper part of the body from over development."