

## MAN'S RANGE OF SOUND

Tiny Galton Whistle is Used to Determine Upper Limit of Sound

In the sense of hearing, numerous problems interest psychologists. Among these may be mentioned the range of sounds that can be heard by an individual—that is, the limit above and below which no sound can be heard.

The solution of these two problems, the determination of the upper and lower limits of sound, has occasioned a great deal of careful work and the construction of many forms of apparatus. For determining the upper limit of sound for any individual—the Galton whistle is generally used. It consists of a tiny pipe, which is lengthened or shortened by a piston adjusted by a micrometer screw. This little instrument can be regulated to make a tone which is too high for any human ear to hear, and which will finally produce only a painful sensation.

The Galton whistle was devised by Francis Galton for his study of individual differences. He had one of the whistles fastened on the end of his cane, and as he walked through the Zoological Gardens he would blow it near the ears of the various animals. He adjusted the whistle too high for his own ear to hear, and if the various animals responded to the sound he knew that their upper limit was greater than that of the human ear.

The ordinary human ear can detect a tone whose vibration rate is at least twenty-five thousand vibrations per second, while the whistle will produce fifty thousand per second. This upper limit varies with the age of the individual to such an extent that, if the upper limit at sixteen years was fifty thousand vibrations, at sixty years of age it would be about twenty-five thousand per second.

In 1888 Argentina had to import its flour. To-day it sells wheat to the world, the annual harvest value amounting to more than \$500,000,000.

## MINERAL WEALTH OF PERU

The Country Has an Abundance of Silver, Gold and Copper

Peru is generally conceded to be the third richest country in the world in the matter of minerals. Silver is the most abundant of the metals and is found in every section of the republic. In many places it is found in its native state, in deposits of greatest richness. It is said that between 1630 and 1824, the Jesuit priests took twenty-seven tons of pure silver out of a single valley, while other mines yielded hundreds of millions of dollars, even under the primitive methods of mining and extraction in vogue in the country.

Gold is found in several sections of the country, although this metal was not mined to any great extent before the conquest by Pizarro, the Spanish conqueror for some reason giving all their attention to the silver mines. Therefore the gold mines from which the native Incas derived their fabulous wealth were abandoned for three centuries or more, and only within recent years has there been a revival of mining for the yellow metal. The rivers of Eastern Peru all have gold-bearing gravel beds.

Mining for copper has proved a most profitable industry in Peru, the mines of Cerro de Pasco being among the famous copper mines in the world.

### Where Licorice Comes From

Most of the familiar licorice-root comes from Syria. It is gathered and piled into great stacks, where it remains until it is thoroughly dry. It is then taken to the factory to undergo certain processes. The finished product is used for flavoring confectionery and beer, as well as entering into the make-up of many brands of tobacco. Some idea of the extent of the industry may be gathered when it is stated that, on an average, 8,000 tons of dry licorice-root is shipped from Aleppo annually while Bagdad yields another 6,000 tons, Antioch 4,000 and Damascus 500 tons.

## LIFE OF PIONEERS IN THE FORESTS

First Settlers in Ontario Were Happy in Spite of Many Hardships

When the early settlers of this country first took up land and built their shanties, the country being all bush, they cleared the land with the use of an axe by chopping the timber down and cutting it into lengths and burning it, says a writer on pioneer life in Ontario. The ashes were gathered and put into leeches, water was put on them to run off the lye which was boiled down into what they called black salts and taken to market. That was the only way they had of obtaining money till they got their land cleared.

In reference to their houses, the roofs of the shanties were made of troughs, hewn out with an axe. The walls of the shanties were of course made of logs, the cracks being stuffed with moss. The chimney was built of sticks and mortar in a triangular shape; mortar was made of mud and straw tramped by the oxen. There were large flat stones at the bottom of the fire-place.

Bread was baked in a large iron pot with three legs and a lid. Hot coals were put under it and on the lid and it was turned around often. Meat was generally boiled. There were lots of potatoes and vegetables, such as cow cabbage, lamb's quarter, wild plums and currants. The only sugar they had was maple sugar, boiled in iron kettles and cooled in small, axe-hewn troughs.

Furniture in those days was made with nothing but an axe and an auger. The chairs were benches with four pegs for legs. The bedstead consisted of a pole at each side and two poles at each end driven into holes in the four upright posts. The bottom of the bed was made of slabs split with the axe, the same as the floor of the shanty.

The women would card wool, spin it and someone in the neighborhood would weave it into cloth, which made beautiful dresses and men's suits. They made their pens for writing out of wild bird's feathers, not having any geese or turkeys.

Through all the hardships the people were very happy. They had church service in their homes turn about. The preacher would come to have service once in three weeks. The women went to church with their aprons and sunbonnets on, and everybody brought their babies. Later on they built churches out of logs and slabs.

People were very hospitable and any person travelling through the country, such as for flour, etc., would call in and stay where night overtook them. Some times at night the floor would be almost covered with men lying with their feet to the fire.

### Rev W W Brewer

Friends in St. John and all over New Brunswick heard with sincere regret of the death at Gagetown at midnight Saturday of Rev. W. W. Brewer, one of the ablest of the Methodist ministers in New Brunswick. Rev. Mr. Brewer was born at Cornwall, England, and was about 65 years of age, entering the Methodist ministry in 1879. Mr. Brewer was ordained in 1874, and served at Andover, Bathurst, Fredericton, Marysville, Gibson, Sussex, Centenary, St. John; First church, Chatham; Central, Moncton; Marysville, Exmouth street, St. John; and Gagetown. Rev. Mr. Brewer's fine gifts of oratory made his pulpit and platform deliverances most popular, and large congregations were the rule in his ministry. He was the friend of the poor and outcast, and in St. John and Charlottetown especially he engaged in mission work which was attended with great success, as were the revival efforts conducted on almost all his charges. A finely educated man of commanding appearance, he attracted notice in any gathering, while his generous nature and warm sympathy for the poor and the afflicted made him the friend of all. His wife, an English lady, survives. Interment was at Gagetown on Tuesday afternoon.

St. John Globe.

### Thomas O'Connor

The death of Thomas O'Connor, formerly of Fairville, occurred Sunday at Johnville (N. B.), where he had made

## HOW MATERIALS GET THEIR NAMES

Whoever stops to think of the derivations of the names of clothing material? For instance, a lady is wearing a satin gown. In that dress she represents the quaint town of Zaytoun, a far inland town in China—satin being the evolution of that word. And the lustrous wrap of velvet derives its name from the Italian City of Veluta. Her neck scarf of lawn was originally produced in Laon, a French town.

And her good man's clothes represent a varied number of districts and towns. His dress suit of thibet derives its texture name from that little known country of Tibet, in Eastern Asia, and the melton overcoat stands for the little English Town of Melton.

His tweed suit originated its name from the weavers of Tweed, in Scotland, some 800 years ago. Serge gets its name from Xerga, a Spanish city. His worsted suit has carried that name ever since the little town of Worsted, in England, noted for its fine yarns, brought the first of these goods onto the market. His khaki originated nearer home than any of us might think—it being a North American Indian word for earth. And every one of these suits probably holds a balse lining—a coarse fabric originating in Balse, Spain.

His wife's muslin morning dress got its name from Musul, in Asia; cambic, from which another of her commonly used house dresses is made, gets its name from Cambric, a district in France, and her afternoon dress of gauze originated its name from Gaza, a once well known city of Palestine.

Calico, takes its name from Calicut, a very old town of India. Once every woman wore the old cashmere shawl, which derived its name from the Valley of Cashmere, in the Himalaya Mountains. Gingham, which has been the material for so many of her aprons, was first used in Nagamp, a small town in Brittany.

The damask furniture covering of raised figures owes its name to the leading trade centre of Syria—Damascus. Buckram, used in the binding of books, originated in the Bokhara Hills of India. And the blanket, which we all think of as a very common noun, got its start from the very proper name of Thomas Blanket, who started years ago the manufacture of this new styled bed covering just outside of the City of London.

his home for some years. He was eighty years of age and besides his family of six sons and three daughters, he leaves fifty-nine grandchildren and four great-grandchildren. Mr. O'Connor was well known and highly esteemed in Fairville and in the city, where he had a large number of friends who will regret sincerely to hear of his death.

The sons surviving are E. A. O'Connor, of Vancouver; T. F. of Melrose (Mass.); Timothy, John and Charles of Brewer Me., and William, of Cedar-street, this city. The daughters are Mrs. John Callahan, of South Brewer Me.; Mrs. Edward Body and Mrs. William Kilfoil, of Johnville.

St. John Times.

### Mrs Phoebe Danville

The death of Mrs. Phoebe Ann Danville, widow of Frederick E. Danville, occurred at her home in Chatham, Thursday morning. Mrs. Danville had been ill for only a few days and her death came as a great shock to many friends.

Mrs. Danville was a sister of the late James T. Carpenter, of this city, and was born in Wickham, Queens county, about eighty years ago. She had lived in Chatham for more than thirty years. Her husband, who died some years ago, was a prominent resident of Chatham. She was a woman of very fine character and will be greatly missed in the community. She was an active member of St. Mary's church of England.

Mrs. Danville is survived by her three sons, V. Alexis and Edwin, both of Chatham, and Frank, of New York, John Carpenter, of Woodstock, is a brother. Mr. and Mrs. Frank Danville will arrive in Chatham Saturday night and the funeral will take place on Sunday afternoon.

—St. John Times.

## FIRST McINTOSH APPLES

Scotch Immigrant Gave His Name to the Ruddy Fruit

When the Scottish Immigrant John McIntosh took possession long ago of his holding in Dundas county, Ontario, he found there, among other things of native growth, a young apple tree. Apple trees were none too plentiful in those days, so he nurtured it and it grew apace until in time it began to yield fruit that brought to the farm fastidious apple eaters from the country miles around.

The apple became so famous at length that John McIntosh planted some of its seed, and his orchard flourished. The apple was ruddy, and in time people began to give it the name of McIntosh, then by natural gradations the apple and, after the family of trees, came to be known as McIntosh Reds.

By this name they have long been famous throughout the Dominion, although they do not grow over a wide area. The St. Lawrence region is very favorable to the species, which not only ranks with the best in some localities has taken the place of the celebrated Fameuse apples of Quebec.

The mother tree has given to Ontario and Quebec a whole race of trees bearing one of the most luscious of fruits. Its descendants have not only beautified many a Canadian country home, but have added largely to the income of many a Canadian husbandman.

## KITCHENER'S FIRST FLIGHT IN BIPLANE

New York, Dec. 29.—A London cable to the New York American says:

Lord Kitchener had his first flight yesterday, with Airman Olivier in a Farman biplane. He flew for fifteen minutes over the suburbs of Cairo, and afterwards said: "It's a splendid game."

## BANISH THE BAR

SLOGAN IN WEST.

Calgary, Alta., Dec. 23.—The movement to "Banish the Bar" in the province of Alberta is taking definite shape and a great convention of the temperance forces will be held in Calgary, on Feb. 18 next, to discuss the entire matter. The news that a plebiscite will be taken on this question in the neighboring province of Saskatchewan next year, has fired the Alberta temperance forces with enthusiasm and they are determined to put up a strong campaign to attain their object.

The campaign as planned is not to abolish the manufacture or sale of liquor, but simply aims at the abolition of the bar and will restrict the sale to stores, clubs and possibly with meals at hotels. The temperance leaders are already reported to be in communication with the Alberta government on the matter, but nothing definite will be known until this phase of the matter until the convention.

The trial of ninety-four Ruthenians on the charge of indicting rebellion against the Austro-Hungarian government was begun on Monday at Marmares Sziget. Great political interest attaches to the case, as it is alleged that the seditious movement was largely promoted and financed from Russia.

The crown prosecutor has begun an investigation into the matter of the will of the late Cardinal Rampolla. The Duke of Campobello is to be prosecuted at an early date on the charge of forging the signature of his uncle, Cardinal Rampolla as the guarantor of the note.

Edward M. Grout, once president of the Borough of Brooklyn, was indicted one Monday for perjury. He is accused of having made a false report of the resources of the Union Bank of Brooklyn, of which he was for two years president.

Germany on Monday refused the request of the United States for the "most favored nation" treatment of American steels, rubber shoes, etc. It was hinted that she was willing to bargain if the United States would make an equivalent offer.

Jules Vedrine, a Frenchman, arrived at Chatham today, having fled from Paris and is being held by the police. He is a well known character and has been in the city for some time.

## GOING TOURIST

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Not as luxurious as the Palace Sleeper, but they meet the requirements of a superior class of patrons just as well—and at half the cost.

### ECONOMY AND COMFORT COMBINED.

W. B. HOWARD, D.P.A., C.P.R., ST. JOHN, N. B.



### CHAS. M LEAN.

Chas McLean of St John, son of the late Allan McLean of Woodstock, died yesterday of pneumonia aged 25 years. He leaves a wife and five children, the former being a daughter of John W Bittion of Upper Woodstock. Miss Sophronia McLean, formerly of W B Blyea's store, now of Moncton, is a sister of deceased, while another sister Mrs Lewis Vegal lives in St John.

### MRS DONALD MACSTAY.

The death of Mrs Donald MacStay took place at the residence of her son, Ben F Craig. Mrs MacStay was 74 years of age and was survived by three sons, William Craig of Houlton, Maurice and Ben of this town, and two sisters, Mrs Albert Garrison of Deer Island, and Mrs Elias Hanson of Holyoke, Mass., and one brother, Ben Johnson of Deer Island.

### HARMON-LUNN.

Raymond Hildreth Harmon, son of Mr and Mrs Calvin E Harmon of Limestone, formerly of Fort Fairfield, was married Wednesday evening, December 17, to Miss Gladys Agnew Lunn, at the residence of the groom's parents. A reception was held there at 8:00 o'clock Wednesday evening, December 31. Mrs Harmon is an estimable young woman of Centreville, N.B., and a graduate of Acadia Seminary at Wolfville, N.S. The happy couple will return home Saturday from a visit to Portland, Boston, and other places of interest. A large number of friends wish them every happiness in the future. — Ft. Fairfield Review.

### WEDGE-McINTOSH

At the home of Mr and Mrs Kenneth McIntosh (Saw) on Wednesday afternoon, the 17th December, Miss Mary McIntosh was married to mar-

riage to Mr Fidel Wedge of Dorchester, Mass., by the Rev James Colhoun, pastor of Glassville Presbyterian church. Thereupon the young couple received the congratulations of the friends who were present, after which a sumptuous repast was served. Many beautiful and useful presents were on view. Mr and Mrs Wedge will return to their home in Dorchester at the New Year.



## System-Saving

The surest way to save is by system. If you deposit a certain amount each week or each month in this bank's Savings Department, you will soon find that you have the means to do something worth while. You will also find that the habit of thrift has fostered your spirit of independence and self-reliance.

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