



Enjoy the Radio Programs This Winter



RADIATION METHOD BASIS MODERN RADIO

Conduction System Discovered By Professor Steinhell About 1838

CHICAGO—(AP)—Radio, once known as "wireless," underwent a process of elimination before the present radiation system was adopted. This method was preceded by two others, in which attempts at sending without wires were made by conduction and induction.

The conduction system was discovered by Professor Steinhell, a German inventor, in 1838. He stumbled upon it when experimenting with steel rails in an endeavor to substitute them for telegraph wires. He found that by using only one telegraph wire, with the earth as the return circuit, telegraph instruments functioned as well as with two wires. This method still is in use.

Steinhell next tried to telegraph solely through the earth. This experiment is said to be the first successful attempt to telegraph without wires, and fifty feet were covered.

S. B. Morse, inventor of wire telegraph and the telegraph code, followed up Steinhell's experiments and in 1844 transmitted messages across a canal 75 feet wide. This was accomplished by two metal conductors in each side of the canal. By the insertion of a battery between the two underwater plates a current was carried across the canal with the water as the conductor. Three miles was the greatest distance reached.

Professor Dolbear of Tufts college, Boston, in 1852 invented an induction transmission device. By this method an electrical influence exerted by a charged body or by a magnetic field is sent to neighboring bodies without wires. Prof. Dolbear was able to transmit both telegraph and voice.

The radiation method is used today in both broadcasting and commercial radio. It comprises a means of disturbing the ether so that a series of electrical waves are produced. Marconi was a pioneer in this field.

Marion County Child Health Work Fine Story

Demonstration Established In This Community Over Three Years Ago; Over 11,000 Inspections Made and 10,000 Health Examinations

Over three years have passed since Marion county requested the Commonwealth Fund of New York City to consider its bid for the establishment of a Child Health Demonstration in its midst. Marion county won the Demonstration with twenty-eight other communities in the far west its competitors.

These three years contain a big story. They mean the giving of over 10,000 health examinations to the children of Marion county.



Dr. William De Kleine, Director

they mean the making of 11,742 inspections of school children to prevent the spread of communicable diseases and promote health; they mean the protecting of over 3,000 children against diphtheria; they mean the protecting of about 2,000 children against smallpox; they mean that Marion county's 10,000 school children have been thinking and living health every day; they mean that every baby, every boy, and every girl in Marion county has had the biggest opportunity for health west of the Rocky mountains. During 1927 alone over 5,700 health examinations have been given Marion county's children, and over 15,000 visits have been made by public health nurses in the interest of the health of Marion county's people.

All this happened because a family in the eastern part of the United States decided, several years ago, that the greatest good their wealth might accomplish lay in serving the children of America. So the Commonwealth Fund came to be, and its program of service to childhood included the establishment of four child health

demonstrations in the United States. Their purpose was to work out the best methods possible for protecting and promoting the health of the children of a community, methods that would be effective, simple, and as inexpensive as possible, and to bring to the public the important discoveries of modern science, which if generally applied would benefit society. "He who has health has hope, and he who has hope has everything"—so at least one phase of the Commonwealth Fund's program concerned itself with health, and particularly with the health of children.

Marion county's was the last Demonstration to be established. Of the other three, one is in Athens, Georgia, one in Rutherford county, Tennessee, and the third, which has just been taken over by the local community, is in Fargo, North Dakota. Each of these communities are decidedly different in type, and each has its own individual problems. Marion county's Demonstration is like no one of the other three.

Marion county's highly developed agriculture, its steadily growing industries, ranging from lumbering to linen manufacturing, its excellent educational facilities, all give it a decided personality, and necessitate the working out of a slightly different program from that of the other three communities.

The little Japanese mother at Lake Labish who begs the public health nurse, who has just helped little Mexican mother at Detroit, wife of a section hand, who brings her well-nigh perfect small son to clinic "to keep him so"; and the lovely baby of a banker in a small community, coming regularly to clinic for a "health checking"; tell the story of the diversity of folk found in Marion county's 1,193 square miles, and also indicate the complexity of the process of teaching health to Marion county's children.

As child health necessitates to bring her we daughter into the world, to give the baby "a nice, short American name"; the community health, 13 of Marion county's communities have organized a health council during the

last three years to better avail themselves of every service of the Demonstration. They are: Aurora (Butterville, Donald, White), Gervais, Hubbard, Jefferson (Marion, Sidney, Talbot), Mill City (Gates and Detroit), Mt. Angel, Salem, Silverton, Scotts Mills, Stayton, Woodburn, Red Hills, North and East. Each of these 13 health councils have provided and are maintaining their own Health Center, where the children may come to receive a health examination from the physician and dentist, and receive inspection or information and advice from the nurse. The health centers are organized and kept running entirely by volunteer workers—interested men and women of the community. It is estimated that about 200 hours of volunteer service for health are given each month by the citizens of Marion county. Without it the success of the work of the regular staff of the Child Health Demonstration would be almost impossible.

The volunteer performs a real and needed service for the pediatrician (or child specialist), who makes the medical examination of babies and children at the clinic; for the dentist who examines the children's teeth; for the nurse who serves the child through the home, the school, the family physician, and the family dentist, and who is really the connecting link between these, helping each to serve the child more effectively; the volunteer serves the health officer who conducts clinics offering protection against diphtheria and smallpox, in addition to his countless other jobs of controlling communicable disease, guarding the milk and food supplies, and safeguarding the public's health in every way possible.

There are other members of the Demonstration staff not served directly by the volunteer, but benefited indirectly by the services. The Director of Health Education works under the direction of the county and city superintendents of schools to help the teacher in her health program in the classroom. A statistician is continually recording, checking, and interpreting the findings of the other members of the staff, who work in the field.

The activities of the Demonstration were begun with only the director, then Dr. Walter H. Brown, and his stenographer, one January day, in 1925. June of that year found a fairly complete staff, and the work well under way.

March of the next year witnessed the establishment of a full time county health unit, with the director of the Demonstration ap-

pointed health officer, and a full time deputy health officer secured to devote his entire energies to the health of Marion county. This replaced the old arrangement of a part time health officer for the city, one for the county, and one for the Salem schools.

"In unity there is strength," and the results achieved by the County Health Unit since its formation demonstrated this. A concentrated campaign has been waged against diphtheria, in cooperation with a committee of physicians over the county. The following table shows the death and case rate for diphtheria since 1928 (the County Health Unit was established in 1926):

Deaths:	Cases:
1923 20	1923 250
1924 17	1924 266
1925 18	1925 159
1926 8	1926 94
1927 1	1927 44

(approx.)

A Salem citizen stated recently that in his opinion the cut in diphtheria cases and death was a sufficient justification for the existence of the Marion County Health Unit. Dr. Vernon A. Douglas, Deputy Health Officer, states, however, that a community can not feel free from danger of deaths occurring from diphtheria until 40 per cent to 70 per cent of its children have received toxin antitoxin. Marion county has only about 40 per cent of its children immunized as yet.

In April of the same year in which the County Health Unit was established (1926), the Oregon Board of Dental Examiners entered into a cooperative agreement with the Commonwealth Fund to establish a Dental Unit which would work out the best methods for developing a program in public health dentistry in a community. After a year of experimentation in Marion county, the Unit has reached a stage where extension service into other communities is now feasible. In November, 1927, the first real piece of extension service was begun in Jackson county, by Dr. Estill L. Brunk, full time dentist for the Unit.

Both the medical and dental program have received the closest kind of cooperation from the medical and dental groups of Marion county. A dental advisory committee, appointed from the Marion-Polk-Yamhill District Dental Society, and a medical advisory committee, appointed from the Marion-Polk-Yamhill Medical Society, pass on every dental and medical procedure before it goes into effect.

This cooperation extends even farther. A report of the health examination given a child at a

clinic is sent to the family physician, whom the nurse goes to for instruction before following up the child's examination with a home visit. The family dentist receives a written report of Dr. Brunk's findings. The parents of the child also receive a written report of every examination.

In addition to the establishment of the County Health Unit and the Dental Unit, the past three years have proved a steady growth for all the services of the Demonstration. While the resignation of Dr. Brown as director in November, 1927 was a matter of real regret, it did not interfere with the routine and development of the program. The Demonstration was fortunate to secure the services of Dr. William DeKleine as Dr. Brown's successor. Dr. DeKleine came to Marion county with a wide background of experience in the public health field, and with several years experience as director of similar demonstrations.

The Demonstration is now entering its fourth year. The end of the following year (1929) will witness the withdrawal of the Commonwealth Fund from Marion county. It is hoped that the value of a general health program will have been thoroughly demonstrated by the end of the fifth year, and that a health unit, manned with an adequate staff to safely guard and promote Marion county's health will have become a permanent and indispensable part of the county's organization.

Large Area Covered By Flood Areas, Wyoming

PINEDALE, Wyo., Dec. 31.—(AP)—Moving slowly over ground covered in some places with six inches of snow, flood waters which yesterday escaped from the North Fork dam in northwestern Wyoming today had reached the junction of the Green river of Big Piney. The waters took out a bridge near Boulder, Wyo., today south-east of here and had spread over a mile wide level meadow land between Pinedale and Cora. The water had inundated a number of ranch houses in its path.

ruined hay and other feed and drowned an unestimated number of cattle, but no lives were lost and none of the ranchers are in danger. The water traveled about twenty miles south of the dam.

Further progress of the flood waters was being halted tonight by freezing temperatures which slowly is turning the water into ice over a layer of snow. This condition is expected to work a severe hardship on the ranchers

who depend to a large extent upon the range land as a winter feeding ground for their herds.

BROKEN NECK FATAL
RAYMOND, Wash., Dec. 31.—(AP)—Charles Henderson of Raymond died from a broken neck and Elwood Scholtz of Raymond was injured seriously today when the motorcycle they were riding crashed into a wood truck at Lebam, 15 miles east of Raymond.

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LISTEN IN

SUNDAY MORNING
12:00-9:00—KXL (250). Sleep Wreckers
8:30-9:15—KOW (492). Comic strip reading.
9:00-11:00—KXJ. Morning music.
9:00-12:00—KWJJ (239). Courtesy concert.
10:00-11:00—KWBS (200). Music.
10:30-12:00—KTBB (283). First Presbyterian church services.
11:00-12:00—KOW. Services from Church of Our Father.
11:00-12:00—KXL. First Methodist church service.

SUNDAY AFTERNOON
12:00-1:00—KWJJ. Organ concert.
12:30-2:00—KXL. Afternoon presentations.
1:00-3:00—KTBB. Music.
1:00-3:00—KWJJ. Studio programs.
2:00-3:00—KXL. Special musical features.
3:00-4:00—KOLN (319). Municipal concert.
3:00-5:00—KOW. NBC programs.
3:00-5:00—KTBB. Symphony orchestra.
7:00-8:00—KXL. Evening presentations.
5:00-6:00—KTBB. Varied program.
5:00-6:00—KOW. NBC programs.

SUNDAY NIGHT
8:00-9:00—KOW (492). Music.
8:00-9:00—KTBB (283). Salon orchestra.
8:00-9:00—KOLN (319). Organ concert.
8:00-9:00—KXL. Dinner concert.
8:00-9:00—KEX. Dinner concert.
8:00-9:00—KOW. NBC program.
7:30-8:00—KOLN. Orchestra.
7:30-8:00—KOW. Courtesy program.
7:30-8:00—KEX. Mount Taber Presbyterian church service.
7:30-9:00—KXL. Music and features.
8:00-9:00—KOLN. First Church of Christ, Scientist, services.
8:00-9:00—KOW. Studio program.
8:00-9:00—KEX. Studio program.
9:00-10:00—KOLN. Musical comedy hour.
9:00-10:00—KOW. Concert.
9:00-10:00—KEX. Bible students.
9:00-11:00—KOW. Symphony orchestra.
NBC—3:30. "Indian Love Lyrics."
3:30-4. orchestra and soloists; 4-4:30.

"From the Concert Platform": 4:30
"Great Moments of History": 6:30
7:30. Symphony hour.
KPO—San Francisco (423). 6:30. NBC.
7:30. organ; 8:00-10. orchestra.
KTON—Long Beach (242). 6. orchestra; 7. Yakimo twins; 7:45. church service; 8:15. stars.
KFOA—Seattle (447). 6:30. NBC.
KFI—Los Angeles (468). 6:30. NBC; 7:30. Solo Killers; 8. Aeolian organ; 9. 10. orchestra.
KGO—Oakland (384). 6:30. NBC; 7:35. church service; 9. 10. orchestra.
KHQ—Spokane (370). 6:30. NBC; 7:30. church service; 9. Bible students.
KTBK—Oakland (580). 7:45. church service.
KOMO—Seattle (306). 6:30. NBC; 7:30. music; 8. church service; 9. health.
KJR—Seattle (481). 6. sports; 6:30. concert; 7:30. 9. vocal; 10-12. dance or orchestra.
KFWB—San Francisco (454). 6. talk; 6:30-8:30. orchestra; 8:30-12. dance orchestra.
KFSB—Los Angeles (361). 7:30. music; 8. light opera; 9. news; 9-10. songs and orchestra.
KFSB—Los Angeles (275). 6:30-9:30. revival service. Aimee Semple McPherson; 10. organ.
KIII—Los Angeles (416). 6. concert; 6:45. news; 7. church service; 8-10. concert orchestra and vocalists.

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