THE OMAHA BEE: SATURDAY, MARCH 7, 1925.

HE WORLD OF]

Distance and Clarity in Sterling Five Result of Several Years' Development Work "King of Ivories"

Now on Records By STERLING G. SEARS. To the average man radio reception is more or less a mystery and comething very difficult to under. From one setting to another bring in the product of the set absolute of the set absolute. It is that is brought into the set absolute. It is the only method the set absolute of the set absolute of the set absolute. The set absolute of the set abs

Convict Who Won Fame Via

mpany that Harry Snodgrass. weeks ago convict No. 1211 at Missouri state prison, will exclusively for Brunswick record

records When the grim gates swung out ward to let Snodgrass back into the world again, he had the salt-an-pepper suit the state gives all released "guests," and a new \$5 bill.

But he reckoned without his many friends to whom his fame had been proadcast by radio. They had sent him gifts totaling over \$10,000 in cash, a new touring car, and many gifts of appreciation which did much to dispet the gloom that years of incarceration had put on the shy little man.

But one of the best presents that awaited him was a contract for the Keith-Albee Orpheum circuit-"big time."-Another was an invitation to play for Brunswick records. Snodgrass' prison history reads like pure romance. A man with a number with hope cut off-with no outlet for normal things, he sank his identity prison.

It became a regular feature.

Radio fans began to ask for solos

fessor." Jack Witten, the announcer became famous for his cheery voice, his clear enunciation, his unfailing humor.

The first Brunswick record by Snodgrass, called "King of the lvories," is a reproduction of the fanous broadcasting so many thousands have heard nightly. It begins with Witten announcink the station-then announces the feature of the evening. Harry Snodgress, Snodgrass renders



in the wood working shop of the The schematic wiring diagram of the Sterling Five radio frequency receiver. It is plainly seen that this circuit is quite a bit out of the ordinary, especially in the audio stages. The receiver consists of tuned radio frequency detector, one stage of transformer coupled and two stages of resistance coupled audio frequency amplification.

Station WOS, located in the dome its energy in all directions when in be adjusted properly when a different operation by merely inserting the the wiring simple and keeping radio spaced from each other and also from of the state capitol, a few blocks from the prison, called for talent to broad-within range of the proven when in be adjusted proper operation, we can see that anyone station is desired. loud speaker or headphone plug into frequency from the resistance coupled the filament leads; **Operating Hints**. within range af its power will be The receiving set we are describ- the power jack and likewise entirely amplifier. The coil at the left, being Warden Crawford organized a able to see the lighthouse provided ing here is one which is the utmost disconnected upon its removal. The the antenna or input coll, is tuned by When all connections have been se- them all together and then leading clamation followed the first program. one's eye is sensitive to the light in simplicity to operate, will give battery consumption is reduced to the condenser just behind it. The curely made connect up "A" batteries the ground wire to your receiving coming therefrom. The analogy in good distance reception, will separate the extent of over 50 per cent on "B" second coil is the detector coil and is to the set and test all filament cir- set.

radio is a single bulb set which will different stations easily and effective batteries and 15 per cent on "A" bat- tuned by the condenser on the right. cuits. Connect "B" batteries to the "see" or "receive" a broadcasting by, will be very economical to operate teries. This of course means con- The rheostat on the left controls the set with a 15 or 25-watt electric light by the band's pianist. Modestly station, provided it is within reason- and, last but not least, very easy to siderably extended life of the vacuum radio and detector tubes, that on the bulb in series with the minus "B" enough, Snodgrass, who before going station, provided it is withouse is construct, provided the proper ma-tubes, able distance. If the lighthouse is construct, provided the proper maright the three andlo tubes. The bind- battery lead to the set. If when the too far from the observer to be seen terials are used. This set is the out- The circuit is balanced perfectly so ing post arrangement across the back set is put into operation the light

His success was sensational. Soon from coast to coast station WOS was picked up by radio-lovers. The sign-ing in signal of the station was "The ing in signal of the station was "The distance telescope would again bring meet the demands of the average therefore, does not send out energy fector, is puts failed by the option of tion on the lower end of the dials. If Missouri Waltz," played by "the pro-



KHJ, Los Angeles Times (404); 3, con ert; 8:28, children; 10, flute club, 1 rchestra; 1, Lost Angels of KHJ, WHAS, Loursville Times (399.8); 7:2 **EVERYDAY RADIO** By KIMBALL HOUTON STARK. A good ground connection is just

number of broadcasting stations op erating we can by moving the dials from one setting to another bring in different broadcasting stations; pro-vided of commentations; pro-

tand. As an introduction to this ar- different broadcasting stations; pro- whereby amplifying can be used with- One 7x18x7 cabinet.

490.7): WEAP.

our: 7:15. faik: 7:36 song rectal; olice quartet: 2. travel talk. WBBR, New York (272.6): 6. violip wal. Bible questions.

Night

ground wire to the pipes of hot air ser 0:05, recital, WFT: Philadelphia (394.5); 6,

WOAW Program

Saturday, March 7.

nd. 120 P M — Readings by Fra-rnes of Friend, Neb. "What Peter Rabbit Caught."

P. M.-Horticultural prog ed from WOAW's remote co the May Seed and Nursery iding, Shenandoah, Is. M.-Public news period.

for Laymen: 7.15, band: 9 pianist; C. New York (526)

Minneapolis-St. Paul (416.4)

philosophies: \$:10, diversified stringed instrument, quartet Memphis Commercial-Appeal

New York (454.5): 6, orchest

s.ic. program. New York (492): 6:15; nianist es; 6:50, violinist, special; 10-10

or hot water heating systems, poor results will be obtained because in- concert. KDKA, Pittsburgh (309.1). results will be obtained because in sulated couplings are used in the pipe line which actually insulate the re-ceiver from the ground, Rust and ero-sion in pipe lines also sometimes cause high resistance joints and cause high resistance joints and

 Kerner Songs,
 KFOA, Seattle (455): 8:45, program.
 St dance: 12:05, orthestra KSE, St. Louis Post Dispatch (5451). In any case, in making a ground onnection, scrape the metal pipe or rod to which the ground wire is atmphony. C. Wushington (468.5) 6, orchestis Die talk: 7:10, concert: 9:30, dan -organ tached, very clean and bright, then

wrap the wire securely around it several times and solder the connection securely, making sure that your soldering iron is hot and that the 'solder" flows into the joint.

A ground clamp can be used to good advantage, but again, great care should be taken to see that the connection is clean and bright before pan tightening the clamp down onto the duc pipe or rod.

In the country, the best ground connection obtainable is a metal rod or pipe driven four or five feet into the ground. An added advantage in making

"What Peter Rabbit Caught." "The Fairv and the Rose." "Jimmy Rabbit Is Ton Late" 6:45 P. M.-Robinon's orchestrs at Brandria Store Restaurants 7:30 P. M.-Waekly address under auxy plees of Ornaha Chamber of Commerce. 9 P. M.-Program under auxpless of the Omaha Printing Company. (a) "Moments Musical" Shubert (b) "A Summer Day" Wright First Christian Church Orchestra Joseph F. Woolerr, in director. Soprano solo. "Lift Thine Eyes". Locan Mrs. Will Cutler. Plano solo. "Lift Thine Eyes". Locan Mrs. Will Cutler. Plano solo. "Inter Oid Refrain". "Arranged by Kreisler Harold Hoefer of Friend. Neb. Plano solo. "Resetilita". ground connections to your radio receiver can be gained by fastening your ground wire to every available object that is grounded, connecting

RADIO Program for March 7.

By Associated Press.

WEET Boston (silent). WGR Buffalo (silent). WGN, Chicago Tribune (A76.2), 6. or. an: 6:50. ensemble, string quintet; 3. assical; 10. orchestra. KYW. Chicago (5354), 7. concert; 8. oral, quartet; 3:05. talk; 3:15. Youth's ompanion.

 Vocal, quartet; 5:95, talk; 5:15, Youth's Comparison.
 WEBH, Chicago Post (370.5); 7, otches-tra, Riveria theater; 9, dance, voest; 11, dance, songs; 12, readings, stories, WMAQ, Chicago News (472.5); 6, or-hestra; 8, Pratt and Daw; 8:30, Russia inctolog; 9, Chicago (145); 7, juliaby; 7:20, wrt.S. Chicago (345); 7, juliaby; 7:20, arn dance, harmony girls; 11, Senate heater revue. Harold Hoeffer, olin solo. Vaise Binette Dorothy Lustgarte Ida Lustgarten pin prano solo. Take Joy Ho

Theater revue. WLW, Cincinnati (423); 6, concert, quintet; 8:30, orchestta. WEAA, Dalles News (475.9); 8:30, Boy Scout mosram; 11, bard. WOC Davenoort (482.6); 6:30, Sand-man; 6:50, religious discussion; 3, so-prano, reader, baritone; 11, orchestra, sones. Baritana and Emily Mitzlaff Furnis "Country Garden

ide Lasigarten.

Hambler

with superlative skill, "Three O'Clock in the Morning Waltz."

NEW DEVICE IS AID TO TUNING

A new device known as the "mon controller" has recently been devel oped for the purpose of enabling radio fans to tune neutrodyne receivers

battery switch being combined with the telephone jack.

American broadcasting stations

Fig. 1-Front view of the Sterling Five receiver. Note that only one jack is used, the

slides as the dials are rotated. On is very distant, the extreme left is a vernier scale Now, if we c calibrated in degrees which corre- broadcasting stations or lighthouses few which can be depended on to give first coil. This coil, the secondary, below the subpanel at the right). The to the audio transformer should be calibrated in degrees which corre-spond to the divisions on the tun-ing dials. In the same general locality, all send-ing dials. In the same colored light, it meters; on the right side is a third scale which may be used for logging various stations. The operator of a scale which may be used for logging various stations. The operator of a neutrodyne receiver may tune to a distant station by merely noting the lighthouse with a different colored lighthouse with a different colored lighthouse with a different colored light is to be readily seen that it wave length of the station in meters and seiting the rule to the corre-sponding number, the inventor claims. EXPERT GOES TO CINITED ALL ANDEDICAL

Radio Remarks.

CENTRAL AMERICA Suppose, now, we are tuning a radio tances on the loud speaker, but under these conditions the distortion be-

Suppose, now, we are tuning a radio tances on the loud speaker, but under Ruben A. Lundquist, chief of the we change the adjustment of the set comes a factor in the tone quality or electrical division of the Department so that it responds to different colors clarity. of Commerce, has sailed to Central America to investigate market pos The day is fast approaching when ly in their transmission and it is

about four months and his filnerary American stations will be heard with the receiving set can be blamed for each Venezuela, Colombia, clearness and regularity even during practically all lost tones and dis-Costa Rica, Nicaragua, Guatemala and the day and afternoons. It is also tortion. Since this is the case, it is half, one and three megohins,

Mexico. Mexico. Mr. Lundquist will make particular inquiry into the question of available soon be possible for a speech to be broadcast to the most distant parts of the loud speaker identically what is the case, it is half, one and three megohms. Eight binding posts, marked if de-sired. Two 4-inch dists. sales agencies for radio and electrical the world irrespective of whether it sent from the station. With these Three grid leak mountings, manufacturers in the United States is made during day or night,- ideas in mind the circuit given hereas well as into the special opportuni- Guglielmo Marconi, famous Italian with was developed and consists of jack. ties and general market conditions of radio inventor. .

the countries included in his tour.

are:

The true regulation of the power of a broadcasting station should be MORE STATIONS ON based on the listener; on the ability of the listener to discard the program LOW WAVELENGHTS of the listener to discard the program-offered by the high-powered station and to select another program in its

Six new Class A stations are being offered for the entertainment of the Trade association. radio fans. The new stations licensed The transoceanic radio telephone

how when the possible and convenfent for any one of us to pick up his telephone

More Radio Patents.

Great Britain's patent office has also been swamped with new inventions public necessity and may be considradio. Last year the number of ered as indispensable in the average, applications was 600, an increase of home as the telephone,-Commissio er D. B. Carson, bureal of navigation. 200 over 1923.

Inside view of the radio frequency receiver. The coils are spaced and set at a certain angle so that the set is operated at the exact point of oscillation, but does not spill over. Note the careful placement and spacing of apparatus.

Resk, who has been interested in ra- there was no obstruction between the pendable, perfect results but is almost | The inductances used in the radio connecting higher voltage on the au- there is any squeal or oscillation presdio developments for several years. lighthouse and the observer. This impossible of damage due to misuse frequency stage and the detector are dio amplifier without overloading the ent adjust the two colls at a smaller With this device the operator would again correspond in radio to or neglect and is very economical in wound clockwise in pancake fashion, radio tube. The audio transformer angle to the front panel until it dis The diameter of the first turn is one should be located at the right hand appears. The dials should be adjusted

With this device the operator may tune the desired station at will. It is nothing more than a calibrated composition which would again bring the broad than a calibrated composition ruler with a soft rubber base which a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which when the station ruler with a soft rubber base which rubber base rubber babe rubb s very distant. Now, if we consider a number of heaps thousands of radio circuits have hear but very is started on the same form and im- between the sockets and the rear of be present in this set which cannot be mediately following the end of the subpanel (they can be seen propecting removed by tuning, the primary leads

photograph.

Parts Necessary.

Five tube sockets. Two 11-plate condensers or equiva- sure that all connections are abso-

Two low-loss coils or equivalent, One low ratio audio transformer, Four .006 mfd. condensers, fixed. One .00025 mfd. condenser, with have made many improvements late grid leak springs.

One .001 mfd. condenser, fixed.

Four grid leaks, one fourth, one mately 30 degrees from the front venes.

One open circuit filament control

technically one stage radio ampli- Two angle brackets for panels,

stock stock.

The filament negative or common Alabama Polytechnic institute, Au lead should be put in first and connected also to the filament control socket. The grid leaks, condensers, lutely perfect or noise will result. The transformer can be wired with

Southern Radio Best. flexible leads, provided they are covered with a high-grade spaghetti, The Programs from broadcasting sta condensers can then be wired and, tions to the south are more easily last, the colls, which are mounted on received than those from the east, at small bakelite strips projecting from Prince Albert, Saskatchewan, report sibilities in Central and South Ameri can countries for American radio and electrical equipment. He will be gone will be enormously increased, and as shown at an angle of approxi- northern Ontario mineral belt inter-

GIVEN COLLEGE



Kansas

WHO, Des Moines (slient) WWJ, Detroit News (352.7); 7:30, con-

WWJ, Deirolt News (Gasher).
WRAP, Fort Worth (silent).
WRAP, Fort Worth (silent).
KNX, Hollywood (327), \$10, music; 10, features; 12, orchestra; 1. Hollywood nicht: 3. Nighthawks.
KTHS, Hot Springs Park (374.5); \$130, instrumental, vocal; 10, frolic.
WDAF Kansas City Star (365.6); 6. School of the Air; 11:45, Nighthawks.
WSUI, Iowa City (483.5); 7:30, Iowa-Northwestern basket hall.
KFI, Los Angeles (467); \$:45, talk; 5, archestra; 3:45, talk; 16, community fea-archestra; 3:45, talk; 16, community fea-tis Nightingale orchestra.
How P M. Organ music.

First threader Sinden Sonrano solos: Sinden (a) "Kasmir" Sinden (b) "Till I Wait" Sinden Mrs E B, McQuillin Plano solo, "Prelude C Minor" Rachmaninoff Catherine Cushing.



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and in a short time be connected with his party in Europe, or with his stateroom on some liner on the ocean .-- Gen, James G. Harbord, pres-We will be able some time to fore cast in a general way, what radio

reception conditions will be each day -Dr. L. W. Austin, radio physical inhoratory, United States bureau of

It seems probable that broadcast ing is permanently established as a

District Representative: L. C. KOHN, 675 Securities Bldg.

Tube Equals 3 Tubes Equal 5 with clear toned Supereflex CIR-KIT be 1950 2 tube 2950 ube 3950



