

Frank Dawson Bliley's
Journal/Album
1920-1921

FRANK DAWSON BLILEY'S JOURNAL & PHOTO ALBUM 1920 (14 Yrs) –1921 (15 Yrs)

*Comments by Charles A. Bliley
March 28, 2016*

INTRODUCTION

This document is a general description of a 33-page journal / album of my father, Frank Dawson Bliley from his youth. I found it in the late 1950s in some personal papers in our family home in Erie, Pennsylvania.

The following is more of a set of notes and general description than an analysis of its contents. However, the journal itself does describe my father's very first ham radio stations and his activities.

PHYSICAL DESCRIPTION

Container: Two-ring binder
Size: 8-1/2 x 5-1/2 Inches, Approximately
Cover: Black, cloth texture
Paper: Light grey

ABOUT THE JOURNAL AND MY CONNECTION

In 1959 I developed an interest in ham radio in what I now know was an attempt to understand the man who was father and passed away when I was just nine years old. In truth, by exploring his hobby, I hoped to gain insight to a passion he had throughout his life and one that became the foundation of his livelihood.

The Bliley family moved to Boulder, Colorado around 1920 to aide in the recovery of Dawson's father, Frank Anderson Bliley, whom they thought had tuberculosis. That turned out not to be true, and the family returned to their hometown of Erie, Pennsylvania, apparently in June 1921. The moved into a duplex home at 450 West 9th Street, Erie, Pennsylvania.

Most of the content is from his very early years activity in ham radio and how he made money doing odd jobs and a newspaper route. The newspaper account was located in the first part of the journal, but it certainly was from the later period when he lived in Erie, based on the street address of his customers. I certainly would have expected his ham radio notes to be first as they represented the more exciting activity in his young life.

He delivered newspapers, cut grass and did odd jobs for a wage. He even noted being paid 16 cents to help out a stranger get gasoline. Apparently,

ever penny counted. The account grew to over fifty dollars of which he "banked" eight in his father's wallet.

His boyhood entrepreneurship and technology interests were the foundation of his interest in becoming a radio engineer and later founding a manufacturing company based on his ham radio hobby at the age of 24.

Notations reflect the investment of some of these earnings in radio equipment and Christmas presents.

HAM RADIO CONTENT

Dawson was an early adopter of the new hobby of amateur radio, which was just 14 years old in April of 1920. Ham radio was then the equivalent of the public gaining access to the Internet in the 1980s. It was an exciting world with seemingly endless possibilities. Early operation was uncontrolled by national governments. Amateur radio was permitted on a non-interfering basis on what was considered a wasteland above 1,500 kHz. The hams soon learned that much longer communications could be realized the higher in frequency they went, albeit less predictable. There were book and magazine articles being written about the excitement of radio communication and the adventures of young practitioners, such as "Radio Boys". Many of these characters were the superheroes of the day and most readers fantasized about being just like them.

He first operated as a listener and as an unlicensed operator. Two-way contacts were a challenge. Operators often logged signals of stations they heard and sent in these lists to radio magazines to let the stations know they were being heard further than they could receive stations in return. In Dawson's journal, you will find several such lists at his stations in Erie and Boulder. One of them is typed; no doubt, this was created on the machine at his father's law office about five blocks from the family home. The lists include stations that were located many hundreds miles, and several a thousand miles away.

It was a practice of ham radio operators to ritually exchange descriptions of their station equipment and comment on its merit. In this way, you could learn from other operator's successes and failures, and consider an adjustment to your own station to improve its effectiveness.

There are several pages of detailed descriptions of his stations, and a few photos. The photos lack quality, but they reflect his interest and pride in his hobby.

The station callsign, 8AGR, credited on the back as 1920, is a callsign from the Eight amateur radio district of the time. It was later subdivided with Erie being assigned to the Third district. This would suggest the family was in Erie when he was first licensed. His callsign in Boulder appears to be 9AXT as Boulder was located in the Ninth District.

A loose photo of his station, 8AGR dated 1920, was found in the journal as well as a technical description of this station in Erie, PA. The receiver equipment is located on the left and the transmitter to the right.

The back cover lists callsigns of stations he send cards confirming two-way radio contact. These cards are referred to as "QSL" or acknowledgment cards and certify contacts for awards or just bragging rights. These were often mere blank postal cards with vital information relating to the contact. Some included graphics drawn by the operator and others were commercially printed with personal graphics or on the back of off-the-shelf photo post cards. This practice is still being used in 2016, albeit at a less frequent level with the advent of computer generated contact confirmations.

RADIO NOTES BY DAWSON BLILEY ABOUT 9AXT & 8AGR

The following are transcriptions from two sheets in his radio journal.

Description of 8AGR

From Sept 12 to Nov 6—1920

*Two Aerials—sending was L aerial
60 ft. long and 25 ft high. Lead-in
40 ft. long—grn. [ground] 12 ft. Receiving —
120 ft. long 25 ft high—T Aerial
leadin 50 ft long—grn 12 ft.
Sending—one in. [inch] spark coil
leadin made of 16 strands of
#35 cotton covered [wire]. Diagram—
[notes to right of diagram]
good results with this set. Later
bought a ½ K.W. [kilowatt] set for \$6—
not such good results with this.
used Edison Storage Bat. [battery] for \$14
for both sending and receiving.*

*8AGR — Con.
Receiving— In Erie all
I heard (except for hams in Erie) was
commercial and those I heard from
Tampa Fla to New York to Chicago
and Sault St. Marie, Can. I
use the Electron relay—which
I find about one of the best
Audions. But critical adjustment
plate voltage 45 V. [Volts] Filament
6 V. Fones [headphones] Murdock 2000 ohms—
find them very good. Loose
coupler — Sears & Roebuck abt [about]*

*the best made for the price. 3,000
meters cap. [capability] I find this receiving
diagram for crystals best heard
far and good with it—
Diagram*

To this day Nov. 6, 1920

Boulder Colo.—Description of 9AXT

Arial— [Diagram of aerial]

*58 ft. from end to end – bicycle
hoops – lead in is ten ft (10)
made of 7 strands of No. 18 –
bare. Ground is 10 ft. and 15 ft.
Aerial is 20 and 30 ft high—
Of 2 of aluminum [aluminum] and 3 of copper.
All lead-in very well insulated.
Sending – ½ K.W. Packard Trans. [spark transformer]
Con. [consisting of] 15 [glass] plates oil emersed—
double tone rotary – O.T. [output transformer] 3 turns
Pri [primary coil] – 9 turns Sec. [secondary] Key 1 K.W.
power double layer knob 8 No
Rec. [receive] switch is small type.
{Diagram on left}
O.T. [output transformer coil] abt 4 in.
apart – wave about 200 M. [meter wavelength]
Bed springs
for one ground.
lites flicker
badly.*

9AXT – cont.

*Receiving— Aerial same
ground same. Sears & Roebuck
loose coupler – All parts assembled
myself— Audion panel –
[Diagram w/ legend]
A—Audio – hole in panel. [for inspection of vacuum tube]
B—Ticker
C—Revstat. [Rheostat/variable resistor]
D—grid lead – not much used.
F—Fone block
F—Sec. V. Condenser. [Secondary voltage condenser/capacitor]
G—A. Bat. [battery] short circuit plug.
H—Sec. & B. Bat. [Terminals for secondary and plate battery]
~~~~~ ~~~~~ ~~~~~  
Both Pri and Sec.*

*are tapped at abt. 250 meters.  
Which give better results. Dia-  
gram —  
[Diagram]  
Fones — Murdock — bought  
in April — as good as any other fones.  
Audion — second broke other in  
Or about Dec. 6, 1920 — now Autiotron  
then Electron Relay, find fixed to Eletron  
better. All hams come in good with this.*

*To this day — Feb. 9, 1921 — 9axt*

### **Description of Aerial at 9AXT in Boulder**

*“58 ft. from end to end — bicycle hoops — leadin is ten ft (10) made of 7 strands of No. 18 — bare.”*

This antenna (aerial) was popular at the time for ships and terrestrial stations. It provided greater range of operation than single-wire antennas. If you look at the diagram in the journal, you will see rings at each end of the antenna. These were bicycle rims used as spreaders and anchors for the seven wires stung between both ends. While a high-desired antenna, it was difficult to keep the rims from spinning and ending up twisting the seven wires into a knot. Considering the relatively small lot size in Boulder, he must have had some cooperation from the neighbors to erect his antenna of such a long length.

The antenna he used at home in Erie for 8AGR was similar but simpler with just three wires spread horizontally across a wooden rod. The Boulder antenna would be marginally better.

### **MISCELLANEOUS NOTES**

#### **Dates**

It would appear this journal was started in based on the entry inside the front cover that the family was moving in June of 1921. The exact date of arrival in Boulder is unknown at the time of this writing.

- February 9, 1921
- June 1, 1921
- Dec. 13, 1926

#### **“Bulbs”—Inside Front Cover**

On the bottom right side of the inside of the front cover is a list of “bulbs”. These are vacuum tubes and are listed by brand names: Edison Radio, Marconi Radio, and General Electric. One or more of these may have been used in his vacuum tube transmitters and receivers. The GE CG-1144 was a

popular tube for airplane radios. There is little doubt that Dawson experimented with several designs presented in hand-drawn sketches and blueprints.

### **“Whittier School —Eight Grade”— Front Cover Inscription**

While in Boulder, it appears Dawson attended the eight grade at the Whittier School, a public school, about one-half mile away—a short 15-minute walk. His sister, Josephine (age 10), also must have attended this school.

Profile from the Web,

*Built in 1882, Whittier is a designated Historic Landmark, Colorado’s oldest continuously operating school. The original Pine Street School was renamed for poet John Greenleaf Whittier, after he wrote back to student Effie Titus, an early Boulder 6th grader, who was in love with his poem, “Snowbound.”*



Whittier School, Boulder, Colorado, C1900 (L) and 2016 (R)

Charles A. Bliley  
March 29, 2016

#####

F. Dawson Bliley  
8th Grade  
Whittier School.

~~1802 Grove St.  
Boulder Colo.~~

~~after June 1st 1922  
450 West 9th St.  
Cris, Penna.~~

LOOSE **IP** LEAF  
STUDENT'S NOTE BOOK

PATENTED Dec. 20, 1904  
Dec. 12, 1905

No. 8058

IRVING-PITT MFG. CO.  
KANSAS CITY, MO.

Bo 7 bs  
E. R. — ER 508521

Marcini — A 200088

Condio-T. — 1112

GE — CG 1144  
513

GE — CG 1144  
649

~~9 A X T~~

~~8 a g r~~

8 A.G.R.

0505  
3388

counts



SPRINGS  
Sent cards  
TO

with 9 ml pen  
- red fm 9HM

81Q  
3QH  
9A1Q  
900  
8ARD  
9FSS  
9WE

$$\begin{array}{r} 30 \\ 35 \\ \hline 85 \end{array}$$

# Accounts

#

|        |   |                  |
|--------|---|------------------|
| 28.00  | - | July 12 sum      |
| 11.00  | - | left in Japas    |
| .85    | - | work this week   |
| - .80  | - | spent            |
| <hr/>  |   |                  |
| 39.35  | - | sum              |
| - .50  | - | on cards - 8th   |
| <hr/>  |   |                  |
| 38.85  |   |                  |
| 1.50   |   | Pat chgd         |
| <hr/>  |   |                  |
| 37.35  |   |                  |
| - 1.75 | - | airtel & instal. |
| <hr/>  |   |                  |
| 35.60  |   | stamp 8yr        |
| .85    | - |                  |
| <hr/>  |   |                  |
| 34.75  |   |                  |
| .40    | - | gross sum        |
| <hr/>  |   |                  |
| 35.15  |   | total            |
|        |   | (over)           |

~~# 35.15~~ - ~~total~~  
 .92 - int. on 415.50  
36.07 - ~~Total~~  
 25 - Lawn A  
 15 - " B

# 36.47  
 25 - " a  
 15 - " b  
 20 - " c

~~# 37.07 Total~~  
 1 # candy - 8-3

~~37.257~~  
~~1.55 - R - a~~  
~~2.55 - R - B~~  
~~37.625 - R - C~~  
~~1.50~~

3  
 Next

# 3 7.62 - Total  
50 - left from pay

27 - I-B

# 3 8.58 - I-C

17 - total of I-A

# 3 8.68  
1154 - P. route

# 4 0 1 2 2  
1 2 5 - Papers - etc

# 40 1 37  
15 L. B  
25 L C

# 4 0 1 7 7 total  
25 - long curtains

# 4 1 0 2 -  
25 - Res. to Winn.

4 1 27  
1 00 Paper route a. 27

42 77

~~42.77~~ ~~42.77~~  
42.77 - Papers - Wk 9 15

43.29  
.05 work of M. Laven

43.34 - L - B  
15 - L - C  
25

43.74 - L - C  
25

~~44.00~~ Papers wk 9 22  
44.90

25 - L - A  
15 - L - B a. 31  
25 - L - C

45.55 - minus .50 for book

45.90 - BWk 27  
45.90 - ok

45.90 - Total  
.15 - detector to Wimp.

---

46.05

1.50 Paper wmk-offic @ \$3

1.30 " " " \$3

---

49.05

1.50 - Paper wmk-offic - 9/10  
82 - I for A5

---

\$ 51.37

25 - L - C

---

51.62

25 - L - A

15 - L - B

---

\$ 52.02

25 L - A

15 L - B

25 L - C

---

\$ 52.67

~~117 I Sept 12~~

5384

53.84

1.50

Pay office rts 5.12

# 55.34

.80 wrk for Mrs. Hamel <sup>dell. paper</sup>

# 56.14

5.00 spent into socket Sept 20

# 51.14

15.00 - 2-50 W. tubes Q.E. Sept 20.

# 36.14

1.50 - paper route office. <sup>weekly</sup> Sept. 19

1.32 - lunch Sept 19

.28 - L-A

# 39.21 - Total

1.50 Paper to Oct. 1

1.37 route

42.08

1.03

Ind - Oct 5

1.50

- office - pay Oct 8.

44.61

44.61 - total  
5.00 red tube sockets.

---

49.61

17.00 - 12 + 5 for c wheels 6 av.

---

⊞ 32.61

25 L-D

1.50 office rite Oct 15

1.03 Ind. Oct 15

---

⊞ 35.39 — Total

1.50 - paper rite Oct. 22

35 - E.H. con. plates.

1.00 - blind Oct 22

2.00 - Bike fees C. House.

---

⊞ 40.24 - Total

12 -

---

⊞ 40.36 - for getting gas for storage

19 -

---

40.55

over



40.55 - total  
1.19 - sund - day Oct 29.  
1.50 - Paper etc - office - Oct 29

---

43.24 - ~~total~~  
1.50 - Office - hold back - Nov 5.  
1.30 - Sund - paid for by Don. Nov 5.

---

46.10  
5.75 - paid for tubes Nov 4.

---

40.35  
15.00 for trans.

---

35.35 - T  
- 4.70 - Times Press.

---

30.65 - T  
3.80 - sold cabinet to Hogen

---

34.45  
5.00 - T was money

---

39.45  
8.50 for one step

---

30.65 - amplaf. trans. BF  
3.50

---

27.15

~~27.25~~

. 55 Ed. H. left telson

~~27.80~~

- 2.00 for inf. cov.

- 2.25 for telphone trans.

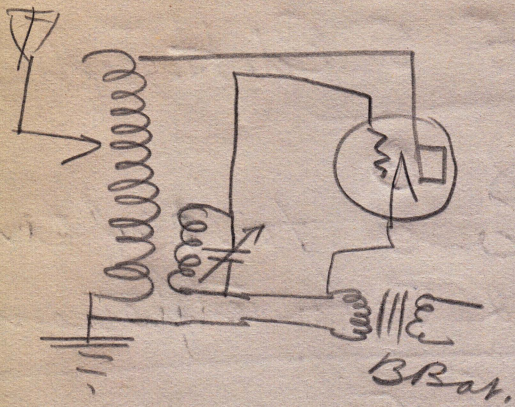
~~23.55~~

1.75 - May 3  
+ 1.75 for 25 sep  
ans

~~21.80~~

~~2.00 - Bah yed~~

~~22.00~~



# Papers

|                       |                         |                             |
|-----------------------|-------------------------|-----------------------------|
| <del>Hours</del><br>H | <del>Time</del><br>Time | 541-W2                      |
| Times                 | Time                    | 541 <sub>W2</sub> --- class |

~~Jobs~~ — week

Paper route — \$ 1.50  
 Indpt. — .48  
 Lawns — .65  
 Errands — abt 1.50

L — Lawns

I — Independence

$$\begin{array}{r} \cancel{150} \\ \cancel{250} \\ \hline 2.25 \\ \cancel{279.00} \\ \hline 279.00 \end{array}$$

$$\begin{array}{r} 99 \\ 40 \\ \hline 59 \end{array}$$

$$\begin{array}{r} 279.00 \\ 99 \\ \hline 279.00 \end{array}$$

$$\begin{array}{r} 200 \\ 200 \\ \hline 400 \end{array}$$

$$\begin{array}{r} 225 \\ 250 \\ \hline 275 \\ \cancel{275} \\ \hline 275 \\ \cancel{275} \\ \hline 275 \end{array}$$

$$\begin{array}{r} 1000 \\ 600 \\ \hline 400 \end{array}$$

$$\begin{array}{r} 275 \\ 4 \\ \hline 1700 \end{array}$$

$$\begin{array}{r} 18 \\ 108 \\ \hline 108 \end{array}$$

$$\begin{array}{r} 11 \\ 11 \end{array}$$

# Tapers

|                          | started                                         | rate           | Per. wks<br>Pute              |
|--------------------------|-------------------------------------------------|----------------|-------------------------------|
| 1 B-439 - Front          | wed                                             | A.10           | 18                            |
| 2 A-54 W2 alley          | ok                                              | ok             | 18                            |
| 3-546 - alley            | ok                                              | ok             | 18                            |
| 4 C-218 short            | Mon.                                            | 03             | 18                            |
| <del>D-363 - short</del> | <del>Tue</del>                                  | <del>A10</del> | <del>18</del>                 |
| 5 D-227 - W 2            | Whed                                            | A18            | 18                            |
| E-B-24 w alnut           | <sup>type</sup> <sup>paper</sup> <sup>mon</sup> | A15            | 18                            |
| F-E-324 w 9.             | wed                                             | A10            | 18                            |
| 7 F-450 w 9.             |                                                 |                | <sup>sub</sup> <sup>mon</sup> |
| 8 G-215 short            | Fri                                             | A19            | 18                            |
| 9 H-8 <u>2B</u> Chestnut | Fri                                             | A19            | <b>16</b>                     |
| 10 I-204 W 8             | Sat.                                            | A20            | 18                            |
| 11 J-123 Lass            | Sat                                             | A20            | 18                            |
| 12 K-458-W 9             | Mon                                             | A22            | 18                            |
| 13 L-239 short           | Tue                                             | A13            | 18                            |
| 14 M-122-W 2             | Thur                                            | A25            | 18                            |
| 15 O-327 Walnut          | <del>Herard</del>                               | <del>A19</del> | 18                            |

# Tapers

|                          | started                                  | site                    | Per. wks<br>Puts                       |
|--------------------------|------------------------------------------|-------------------------|----------------------------------------|
| 1 B-439 - Front          | wed                                      | A.10                    | 18                                     |
| 2 A-541W2 alley          | ok                                       | ok                      | 18                                     |
| 3 - 547 - alley          | ok                                       | ok                      | 18                                     |
| 4 C-218 short            | Mon.                                     | 03                      | 18                                     |
| <del>D-363 - short</del> | Tue                                      | A10                     | 18                                     |
| 5 D-227 - W 2            | Thurs                                    | A 18                    | 18                                     |
| E-E-324 w alnut          | <sup>Thurs paper</sup><br><sub>mon</sub> | A 15                    | 18                                     |
| F-450 w 9                | wed                                      | A 10                    | 18                                     |
| <del>G-215 short</del>   | Fri                                      | A 19                    | <sup>sub</sup><br><sub>mon</sub><br>18 |
| 9 H-8 <u>2B</u> Chestnut | Fri                                      | A 19                    | <u>16</u>                              |
| 10 I-204 W 8             | Sat.                                     | A 20                    | 18                                     |
| 11 J-123 Lass            | Sat                                      | A 20                    | 18                                     |
| 12 K-458-W 9             | Mon                                      | A 22                    | 18                                     |
| 13 L 239 short           | Tue                                      | A 23                    | 18                                     |
| 14 M 122-W 2             | Thurs                                    | A 25                    | 18                                     |
| 15 O-327 Alnut           | <sup>Herold</sup><br><del>Herold</del>   | <del>A 19</del><br>A 19 | 18                                     |

# #Route #11.

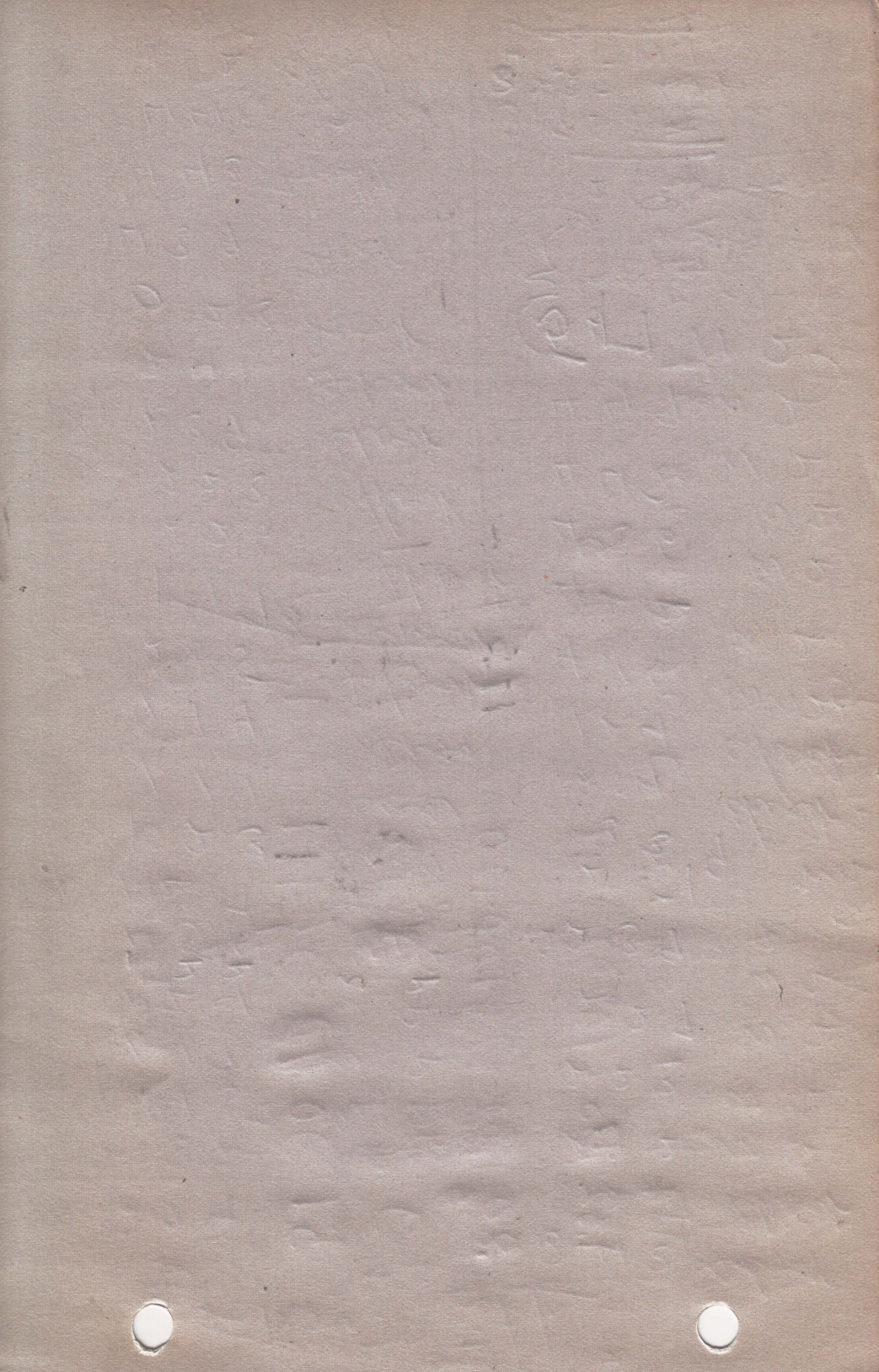
x 204 w 8  
 232 ~~hass~~  
 145 w 2  
 111 w 2  
 124 w 2  
 122 w 2  
 154 w 2  
 \* 127 ~~hass~~  
 x 123 ~~hass~~  
 111 ~~hass~~  
 114 ~~hass~~  
 205 ~~short~~  
~~11 1/2 short~~  
 11 1/2 short  
 226 short  
 223 short  
 x 239 short  
 241 short  
 323 front  
 x 439 front  
 443 front  
 445 front  
 102 chest  
 335 short

343 short  
 327 short  
 212 w 2  
 223 w 2  
 227 w 2  
 239 w 2  
 251 w 2  
 339 chest 2  
 204 chest 2  
 124 w 2  
 410 w 2  
 422 w 2  
 436 w 2  
 448 w 2  
 449 w 2  
 541 w 2  
 3 in alley - Times  
 8 Herald -  
 2 Papers  


---

 318 - w walnut  
 823 - chest  
 458 - w 9  
 452 - w 9  
 450 - w 9





Letter A 15 22 29 55 12 19 26 0-3 10 17 24 31 N-7 14 21 28 5 12 19 26

<sup>2</sup> A 30 36 36 30 36 36 34 34

B 30 18 18 15 18 18 17 17

C 15 18 03 = - - 0 17

D 18 18 18 15 18 18 17 17

<sup>2</sup> E 18 17 18 15 18 18 17 17

<sup>2</sup> F 18 18 18 24 36 36 34 34

G 06 09 - - - - 8

H 03 10 10 13 18 18 17 17

I - 18 18 15 18 18 17 17

J - 21 18 15 18 18 17 17

L - 15 09 15 18 18 17 17

K - 18 18 15 18 18 17 17

M - - 27 15 18 18 17 17

N - - - - - 17

O - - - - - 17

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

1895

Handwritten notes in the left margin, including the word "Fruit" and other illegible text.

Handwritten notes at the bottom of the page, including the word "Fruit" and other illegible text.

1895

W e e k s

R'ed

013.

A-15 22 29 5-5 12 19 26 0-8 18 22 29 185 N-12 19

R'ed for  
selling  
papers 1.32 1.90 1.98 1.82 2.37 2.52 2.52 2.05 2.05

Papers  
Cost .80 1.00 1.20 1.00 1.20 1.20 1.05 1.02 1.02

Papers  
Bot  
per day 9 12 12 12 12 12 12 17 17

Total  
Bot.  
w/s 51 90 90 82 117 132 137 103 103



1951-1952  
 1953-1954  
 1955-1956  
 1957-1958  
 1959-1960  
 1961-1962  
 1963-1964  
 1965-1966  
 1967-1968  
 1969-1970  
 1971-1972  
 1973-1974  
 1975-1976  
 1977-1978  
 1979-1980  
 1981-1982  
 1983-1984  
 1985-1986  
 1987-1988  
 1989-1990  
 1991-1992  
 1993-1994  
 1995-1996  
 1997-1998  
 1999-2000  
 2001-2002  
 2003-2004  
 2005-2006  
 2007-2008  
 2009-2010  
 2011-2012  
 2013-2014  
 2015-2016  
 2017-2018  
 2019-2020  
 2021-2022  
 2023-2024  
 2025-2026  
 2027-2028  
 2029-2030  
 2031-2032  
 2033-2034  
 2035-2036  
 2037-2038  
 2039-2040  
 2041-2042  
 2043-2044  
 2045-2046  
 2047-2048  
 2049-2050  
 2051-2052  
 2053-2054  
 2055-2056  
 2057-2058  
 2059-2060  
 2061-2062  
 2063-2064  
 2065-2066  
 2067-2068  
 2069-2070  
 2071-2072  
 2073-2074  
 2075-2076  
 2077-2078  
 2079-2080  
 2081-2082  
 2083-2084  
 2085-2086  
 2087-2088  
 2089-2090  
 2091-2092  
 2093-2094  
 2095-2096  
 2097-2098  
 2099-2100

1951-1952  
 1953-1954  
 1955-1956  
 1957-1958  
 1959-1960  
 1961-1962  
 1963-1964  
 1965-1966  
 1967-1968  
 1969-1970  
 1971-1972  
 1973-1974  
 1975-1976  
 1977-1978  
 1979-1980  
 1981-1982  
 1983-1984  
 1985-1986  
 1987-1988  
 1989-1990  
 1991-1992  
 1993-1994  
 1995-1996  
 1997-1998  
 1999-2000  
 2001-2002  
 2003-2004  
 2005-2006  
 2007-2008  
 2009-2010  
 2011-2012  
 2013-2014  
 2015-2016  
 2017-2018  
 2019-2020  
 2021-2022  
 2023-2024  
 2025-2026  
 2027-2028  
 2029-2030  
 2031-2032  
 2033-2034  
 2035-2036  
 2037-2038  
 2039-2040  
 2041-2042  
 2043-2044  
 2045-2046  
 2047-2048  
 2049-2050  
 2051-2052  
 2053-2054  
 2055-2056  
 2057-2058  
 2059-2060  
 2061-2062  
 2063-2064  
 2065-2066  
 2067-2068  
 2069-2070  
 2071-2072  
 2073-2074  
 2075-2076  
 2077-2078  
 2079-2080  
 2081-2082  
 2083-2084  
 2085-2086  
 2087-2088  
 2089-2090  
 2091-2092  
 2093-2094  
 2095-2096  
 2097-2098  
 2099-2100

# Lawns

---

|          |                       |
|----------|-----------------------|
| 20       | - On back lawn        |
| 15       | - On front lawn       |
| 135      | - Blosses lawn & with |
| <hr/> 70 | - T                   |



Aug. - 11 - 1912

Every Saturday -

who

date

Paid

cost

|          |        |                |         |
|----------|--------|----------------|---------|
| ✓ Sass B | Aug 10 | <del>27</del>  |         |
| 25 41 A  |        | .57            | .10*    |
| ✓ 450 C  | Aug 11 | <del>.12</del> | .22     |
| walnut D |        | .06            | .05     |
|          |        |                | .03 1/2 |



I

K

M

~~Q~~

J

L

F

B

D

A

E

H

~~At~~  
 Bulb - \$ 30.00  
 trans - 12.00  
 misc etc - 1.50  


---

 43.00

~~51.37~~  


---

~~43.50~~  


---

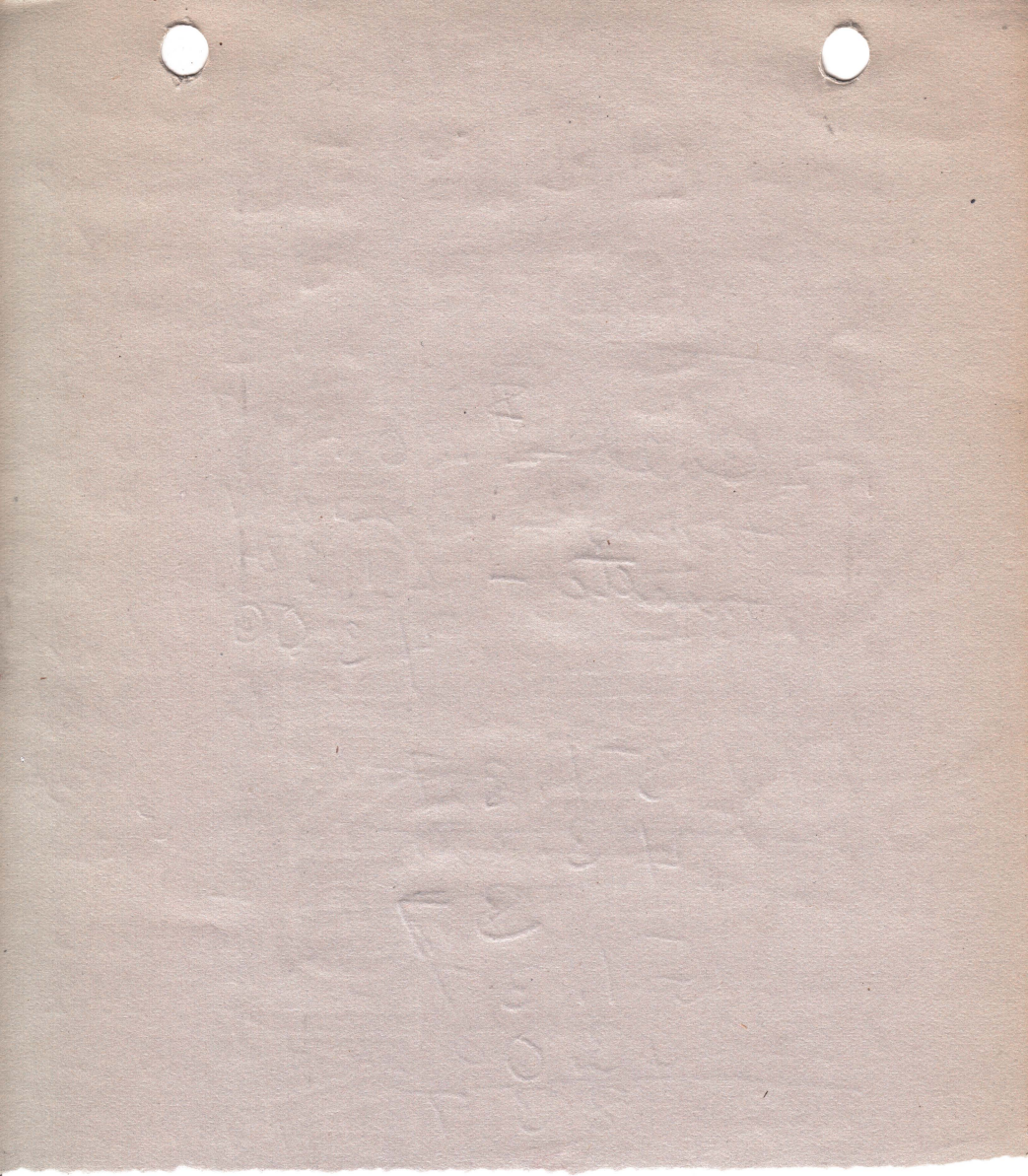
~~87~~  
 51.37  
 43.00  


---

 837

~~1.50~~  
~~12.00~~  
~~30.00~~  
 50





To T d

1.00 S. 17

- 3.
  - 2.
  1. *Museum Conf.*
- LIST.

# HISTORY.

Radio

notes

by

Dawson Bliley

9AXT

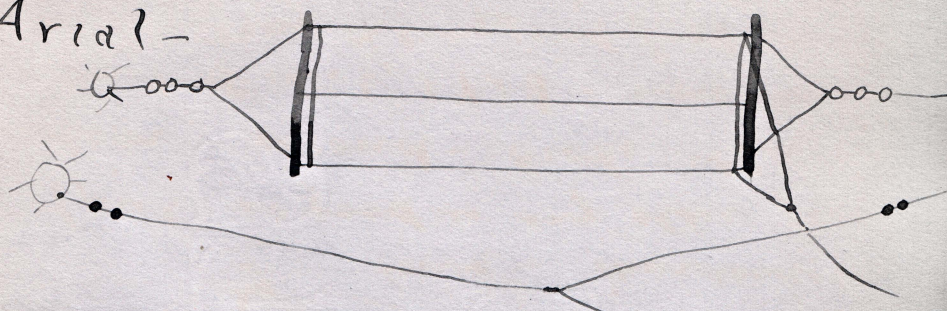
⊕  
8AGR



Frm Sept 12  
 Co No. 6 -  
 1920

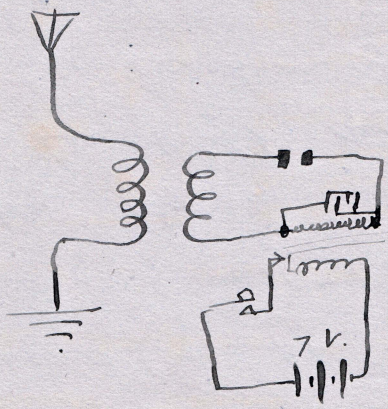
# Description of - 8AGR

Aerial -



Two aeriols - sending was L aerial -  
 60 ft. long and 25 ft high. lead-in  
 40 ft. long - grn. 12 ft. Receiving -  
 120 ft. long 25 ft high - T. Aerial  
 lead-in 50 ft long - grn 12 ft.

Sending - one in. spark coil  
 lead-in made of 16 strands of  
 #3 cotton covered. Diagram -



good results  
 with this  
 set. Later  
 bought a  $\frac{1}{2}$  K.W.  
 set for #6 -

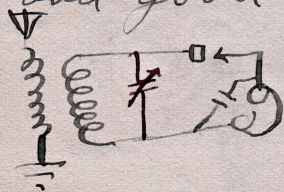
not such good results with this.  
 used Edison Storage Bat. for #14  
 for both sending and receiving.



# OAGR - Con.

Receiving -

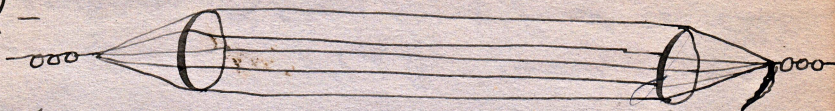
Via Erie all I heard (except hams in Erie) was commercial and those I heard from Tampa Fla to New York to Chicago and Sault St. Marie, Con. I use the Electron relay - which I find about one of the best Audions. but critical adjustments plate voltage 45 V. Filament 6 V. Jones Murdock 2000 ohms - find them very good. Loose Coupler - Sears & Roebuck abt the best made for price. 3,000 meters cap. I find this receiving diagram for crystals best heard far and good with it -



To this day Nov. 6, 1920  
(8 yrs)

Boulder Colo - Description of - 9AXT

Arial -



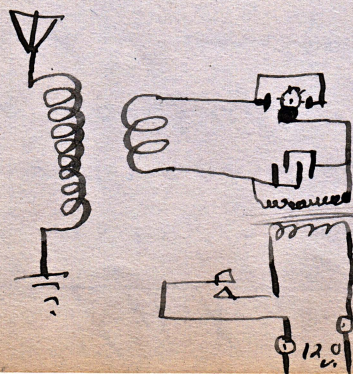
5-8 ft. from end to end - bicycle  
hoops - lead-in is ten ft (10)  
made of 7 strands of no. 18 -  
bare. Ground is 10 ft and 15 ft.  
Aerial is 20 and 30 ft high -  
of 2 of aluminum and 3 of copper.

all lead-in very well insulated.

Sending -  $\frac{1}{2}$  K.W. Packard Trans.

Con. 15 plates oil emersed -  
double tone rotary - O.T. 3 turns  
Pri - 9 turns Sec. - Key 1K.W.  
power double layer knob - 8 No

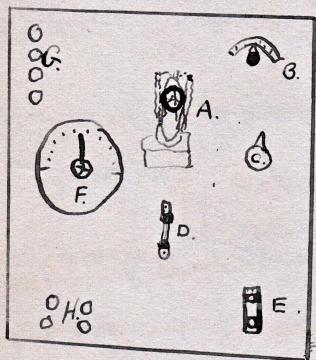
Rec. switch is small type.



O.T. abt 4 in.  
apart - wave  
about 2.00 m.  
Bed springs  
for one ground.  
lites flicker  
badly.

# GAXT - cont.

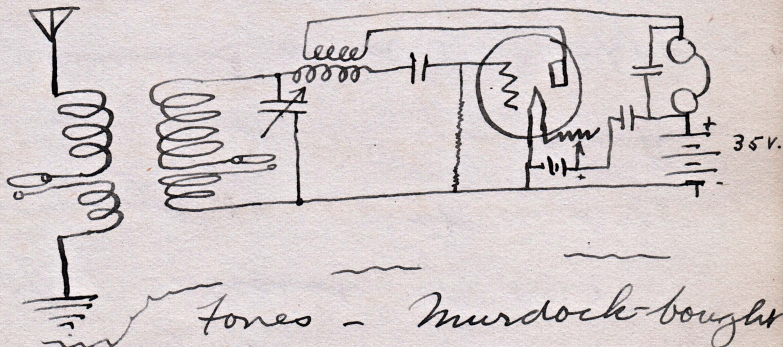
Receiving - aerial same -  
ground same. Sears & Roebuck  
loose coupler - all parts assembled  
myself - audion panel - -



- A - Audion - hole in panel.
- B - tickler
- C - Revstat.
- D - Grid leak - not much used.
- E - fore block.
- F - Sec. V. Condenser.
- G - A. Bat. - short circuit plug.
- H - Sec. B. Bat.

Both Pri & Sec.

are tapped at abt. 250 meters.  
which give better results. Dia-  
gram -



Fones - Murdock bought  
in April - as good as any other fones.  
Audion - second - broke other in  
or about Dec. 6, 1920 - now Audiotron  
then Electroy Relay, find find th Electron  
better. All hours come in good with this.  
To this day - Feb 9, 1921 - GAXT

States H'rd by 9AXT

Heard with audion and crystal since being in Colorado:- audion:

Washington, Kentucky, Minnesota, Utah, Arkansas, Oklahoma, - with audion and crystal:

California, Illinois, Kansas, Colorado, North Dakota, South Dakota, Nebraska, Iowa, Missouri, Indiana, Wisconsin, Texas, New Mexico.

Commercial sts. heard in Jugr before Nov. 7. in states:

Virginia, New York, Michigan, Pennsylvania, Louisiana, South Carolina, Florida, Ohio, Illinois, New Jersey, Massachusetts, Rhode Island, Canada: Ontario, Quebec.

## Miles to .... From Boulder, Colo.

| City or town  | State   | Miles | Call letter   |
|---------------|---------|-------|---------------|
| Chicago       | Ill.    | 850   | 9d10-9am-etc. |
| Roswell       | N. Mex. | 550   | 5Zd-          |
| Los Angeles   | Calif.  | 900   | 6DZ-6MO       |
| San Francisco | Calif.  | 975   | 6AZ-          |
| Amarillo      | Texas   | 490   | 5IF           |
| Little Rock   | Ark.    | 1060  | 5JD           |
| Oklahoma City | Okl.    | 700   | 5JS           |
| Houston       | Texas   | 1150  | 5ZX           |
| Wichita       | Kan.    | 550   | 9BW-9PS-90E   |
| St. Louis     | Mo.     | 1070  | 9EG 9ZB       |
| Denver        | Colo.   | 28    | 6WR-9AYD-etc. |
| Lincoln       | Neb.    | 600   | 9YY           |
| Jerseville    | Ill.    | 1065  | 9LG           |
| Galesburg     | Ill.    | 1110  | 9ET           |

Am. S.S. & Private sts. - W-call -

- W A I - Latouche  
W C O - Wyandotte (Wyandotte T. Co.)  
W B R - State of Ohio  
W C H - Huron  
W C G - Brooklyn, N.Y.  
W C Y - Cape May N.J.  
W C Z - Illinois  
W D R - Detroit, Mich. (Ford Co.)  
W E A - City of Cleveland III.  
W E I - Earling  
W E F - City of Detroit III.  
W E L - Smith  
W F A - Georgia (Goodrich Iron. Co.)  
W F D - Nevada  
W F Q - Arizona  
W B F - Boston Mass. U.S.N.  
W I I - New Brunswick N.J.  
W L E - Maitland  
W N I - William A. Reiss.  
W O U - Oregon  
W Q G - Fayette Brown  
W Q P -  
W S E - New York N.Y. (Babylon)  
W R U -  
W Q E - Harvey H. Brown  
W K B - Arizona

Con. of W-classes.

W B F -

W C I - New Part R. 2.

W

W

W

W

W

W

W

W

W

W

W

Am. S.S. & Private Sts. K-call

K K U I - 1/2 athor

K M X - Colon

K O Q V - Caldas Amss.

R T Z -

K U T M - John P. Reiss Amss

K U E R -

R B K - Bulk, Germany.?

K

K

K

K

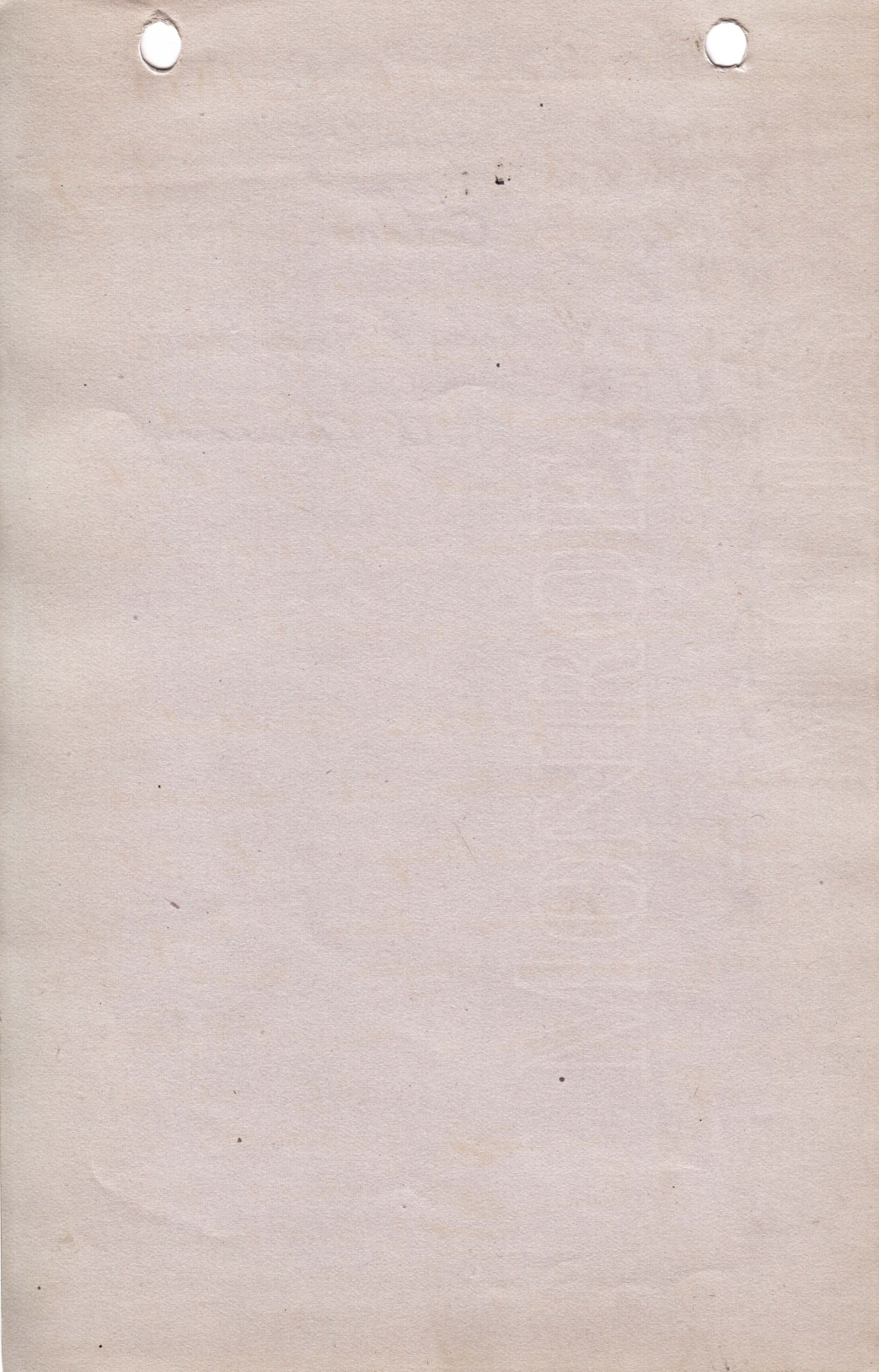
K

K

K

~~K~~





S t s. H r d. - A m. c o m m e r c i a l.

- N A A - G r i n l i n g t o n, V r.  
N A H - N e w Y o o k, N. Y.  
N A J - G r e a t L a k e s, M i c h.  
N A I - P h i l a d e l p h i a, P a.  
N A M - N o r f o l k V r.  
N A T - N e w O r l e a n s L.  
N C Z - C a p e H e n r y V r.  
N E M - D e n v e r, U. S. N.  
N O L - D e t r o i t M i c h.  
N A O - C h a r l e s t o n S. C.  
N G E - M i a m i F l a.  
N G L - T a m p a F l a.  
N H M - A r t i c A m. S. S.  
N H R - C l e v e l a n d x O.  
N N K - M a n s h a n A m S. S.  
N N Z - B u f f a l o N. Y.  
N Q B - Q u e b e c O.  
N R H - C l e v e l a n d O.  
N S D - C a p e M a y N. J.  
N H S - G u l f P o r t A m. S. S.  
N U R - C h i c a g o I l l.  
N R W - C o m o n c h e A m. S. S.  
~~N R J - O s u p e e A m S. S.~~  
N -  
N -

Canadian Sts. Hrd.  
SHIPS.

CGP - Sumatra  
CHG -  
CKG -  
CKP -  
CKJ -  
VGE - Huronic  
XVB -

Land Sts.

VBB - Sault St. Marie  
VBC - Tobermory  
VBD - Midland  
VBE - Point Edward  
VBF - Port Burwell  
VBG - Toronto  
VBJ - Glenlyn  
VBU - Stoctacona  
VGE - Huronic  
V  
V  
V

7" District-9AXT

7  
7  
7  
7  
7  
7  
7  
7  
7  
7  
7  
7  
7  
7  
7

7 IX - Estes

Snohomish, Wash.

7 MH

7 WU

6" District - 9AXT

6 AN Rohrs

Albany, Cal.

6 DZ Tulp

Los Angeles, Cal.

6 AH R. Kern

Oakland, Cal.

6

6 W v - Aurora Hospital, Aurora, Colo.

6

6" Dist

- 9KT

- 6
- 6
- 6
- 6
- 6
- 6
- 6
- 6
- 6
- 6
- 6
- 6

Z A Kaar - . . . . .

Salt Lake City, Utah

5" District

- 9AKT

- 5
- 5
- 5
- 5
- 5
- 5
- 5
- 5

5IF Martin

Armadillo, Tex.

5E

5JD Kinsolving

Little Rock, Ark.

5J King (Perching radio corps)

Oklahoma City, Okla.

5

5

5<sup>11</sup> Dist. - GAKT.

5

5 MF

5

5 SM

5

5 SV

5

5

5

5

5

5

5 Z A- Roswell, N. Mex.

5

5

5

5

5 Z X-A.P. Daniel, 2504 Bagby St. Houston, Texas.



CALLS HEARD

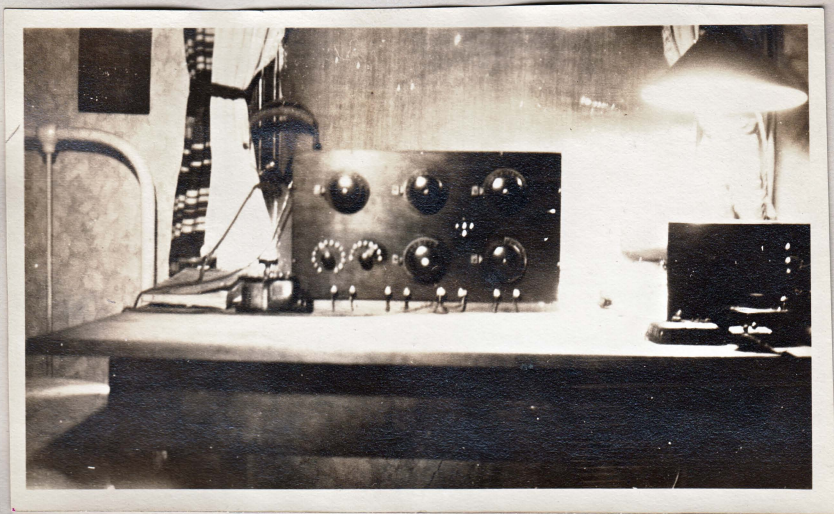
9th District

|        |                          |
|--------|--------------------------|
| 9AAJ   | Littleton, Colo.         |
| 9AC    | Chicago, Ill.            |
| 9AE    | Boone, Iowa              |
| 9AEG   | Eldora, Kan.             |
| 9AIG   | Sioux Falls, N. D.       |
| (9AID) | Boulder, Colo.           |
| 9AII   | Denver, Colo.            |
| 9AL    | Chicago, Ill.            |
| 9AM    | Chicago, Ill.            |
| 9AMB   | Denver                   |
| 9AQY   | Colorado Springs, Colo.  |
| 9ALG   | Wichita, Kan.            |
| 9AQW   | Eureka, Ill.             |
| 9AWB   | Denver                   |
| 9AWD   | Denver, Colo.            |
| 9AW    | Chicago                  |
| (9AVS) | Denver                   |
| 9AQ    | Chicago                  |
| 9AKR   | Hastings, Neb.           |
| 9AYU   | Denver                   |
| 9ARJ   | Housington, Kan.         |
| 9 AKC  | Wood River, Ill.         |
| 9AON   | Clayton, Mo.             |
| 9AUO   | Wichita, Kan.            |
| 9AXU   | Boone, Iowa              |
| 9ACN   | Lone Tree, Iowa          |
| 9AXO   | Morrison, Ill.           |
| 9DCG   | <i>Poplarville, Neb.</i> |
| 9DCY   | <i>Denver</i>            |
| 9DBT   | <i>Superior, Wis.</i>    |
| 9DB    | Muncie, Ind.             |
| 9EE    | Valley City, N. D.       |
| 9EL    | Council Grove, Kan.      |
| 9EMA   | -----                    |
| 9EMI   | -----                    |
| 9EQ    | St. Louis, Mo.           |
| 9FO    | Denver                   |
| 9GG    | Hockman, Kty.            |
| 9GN    | St. Louis, Mo.           |
| 9HM    | St. Paul, Minn.          |
| 9HI    | Topeka, Kan.             |
| 9EY    | Chicago                  |
| 9ET    | Gallesburg, Ill.         |
| (9IGT) | Boulder, Colo.           |



|        |                       |
|--------|-----------------------|
| 9ATO   | Chicago               |
| 9AYV   | D <sup>p</sup> Denver |
| 9JA    | Marengo, Iowa.        |
| 9LR    | Anthony, Kan.         |
| 9WW    | Milwaukee, Wis.       |
| 9UT    | Sioux Falls, S.D.     |
| 9ER    | Laufayette, Ind.      |
| 9WQ    | Denver                |
| 9OE    | Wichita, Kan.         |
| 9PS    | Wichita, Kan.         |
| 9QH    | Danville, Ill.        |
| 9QW    | Chicago               |
| 9QO    | Lawrence, Kan.        |
| 9SU    | Woodstock, Ill.       |
| 9RY    | Topeka, Kan.          |
| 9YZ    | -----                 |
| 9WR    | Kansas City, Mo.      |
| 9ZBZR  | St. Louis, Mo.        |
| 9ZL    | Manitowoc, Wis.       |
| 9----- |                       |
| 9AH    | Chicago               |
| 9AS    | Chicago               |
| 9AIO   | Gypsum, Colo.         |
| 9AWW   | Independance, Mo.     |
| 9ATD   | Denver                |
| 9AFX   | Stromsburg, Neb.      |
| 9AZ    | Chicago               |
| 9BW    | Wichita, Kan.         |
| 9EY    | Chicago               |
| 9JI    | Lawrence, Kan.        |
| 9LW    | Wahpeton, N.D.        |
| 9LG    | Jerseyville, Ill.     |
| 9TD    | Columbia, Mo.         |
| 9WU    | Ellendale, N.D.       |
| 9WY    | Watertoun, S.D.       |
| 9YA    | Iowa City, Iowa       |
| 9YW    | Rapid City, S.D.      |
| 9YW    | " " " "               |
| 9WY    | Lincoln, Neb.         |
| 9AQX   | Mulvane, Kan.         |

Fotographs of Sets



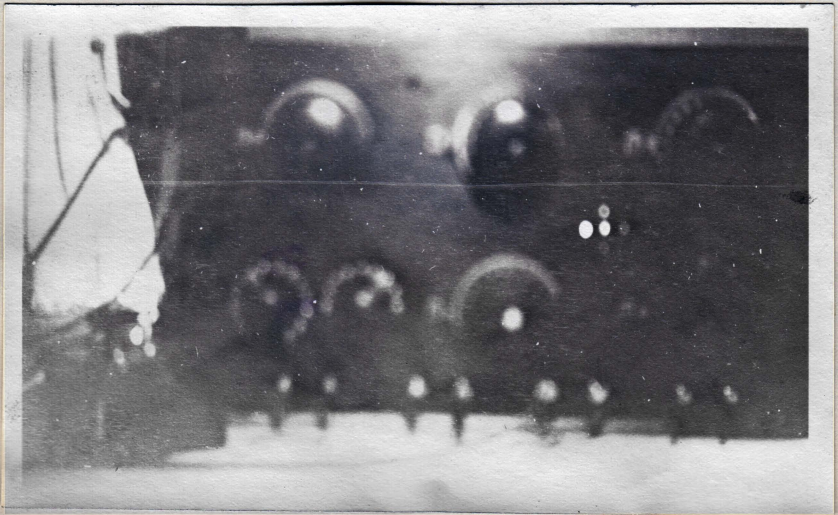
BAGR in Aug. 1921



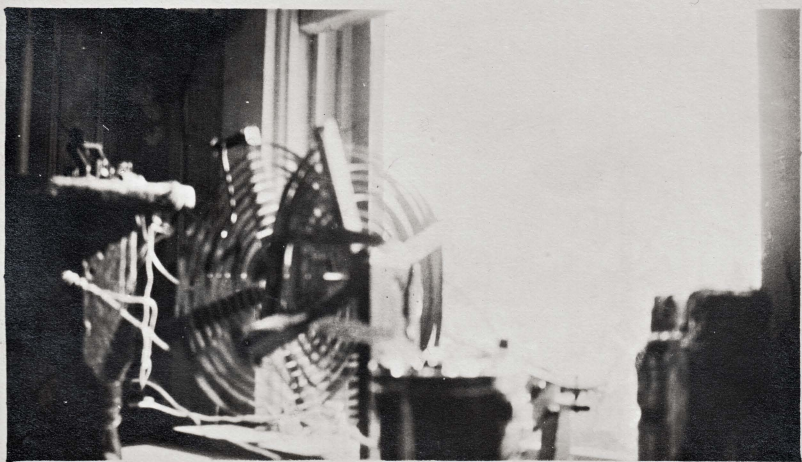
C.W. set - Aug. 1921



8 AGR - Aerial - Aug. 1921



9 AGR - REC. A. 1921



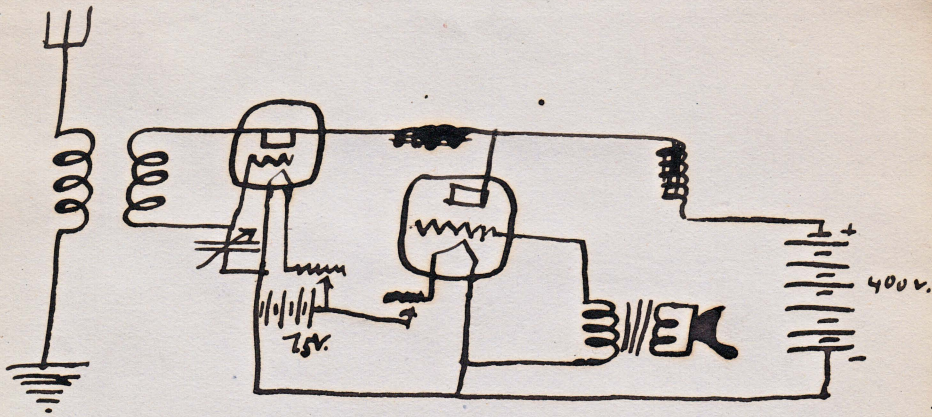
9AXT- Trans - Feb - 1921



station of 9AXT

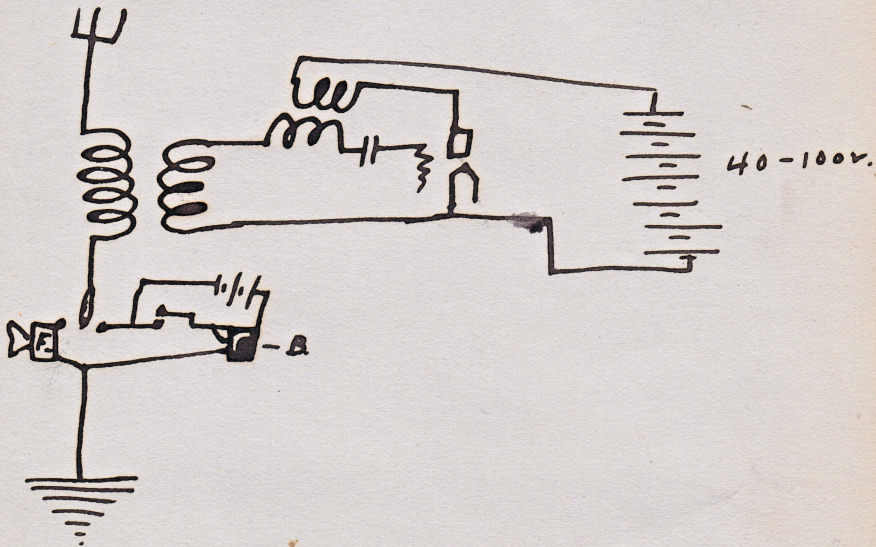


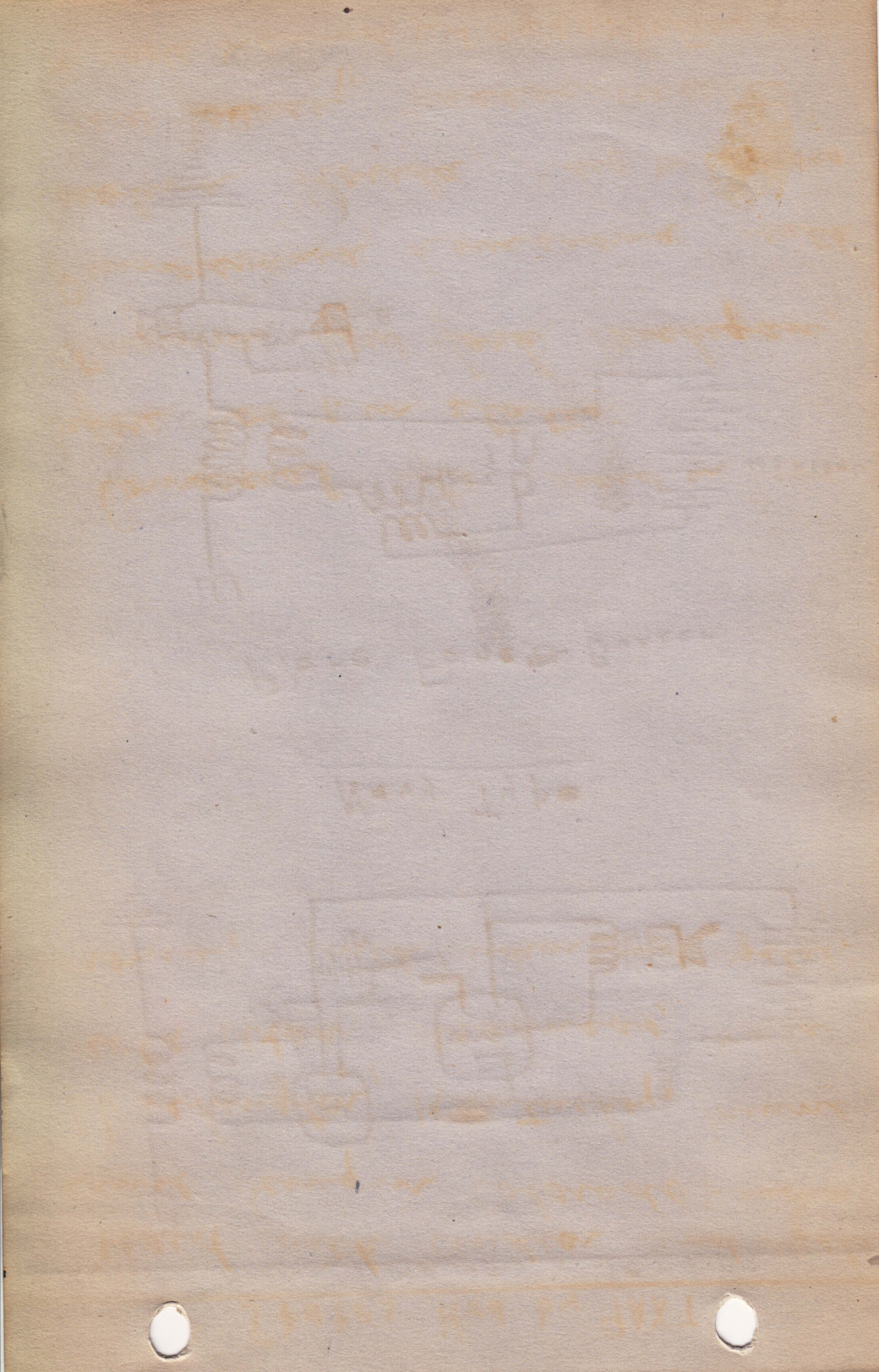
# Audion Diagrams - Sending



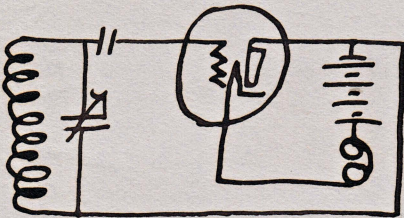
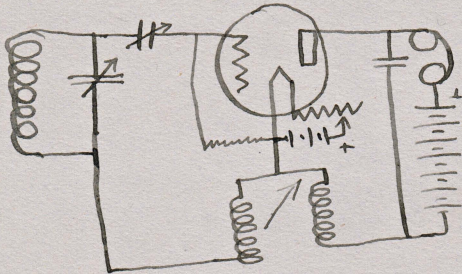
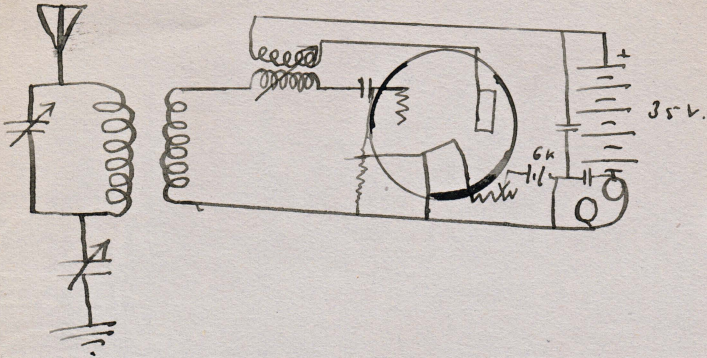
Navy Type.

## Plane Fone. & Buzzer.





# Audion Diagrams - Rec.

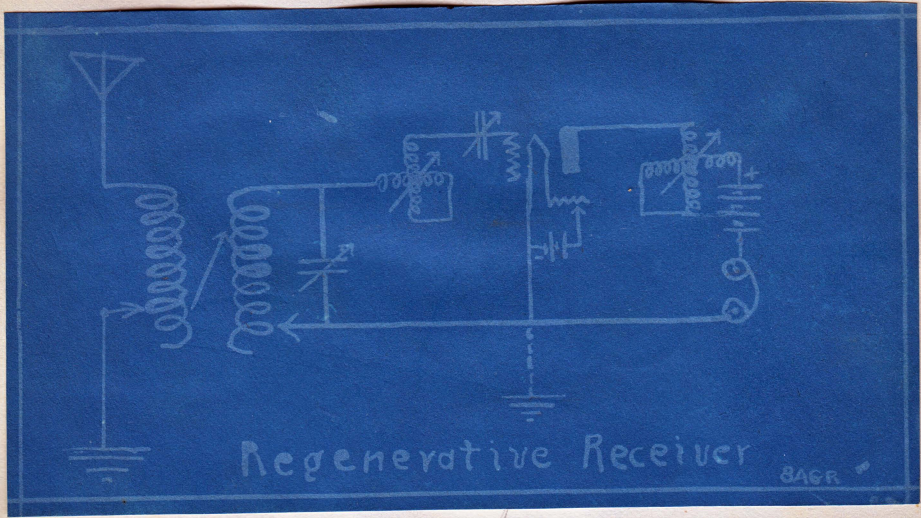




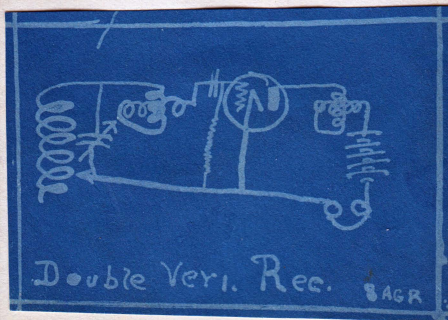


# Blue-prints - Diagrams.

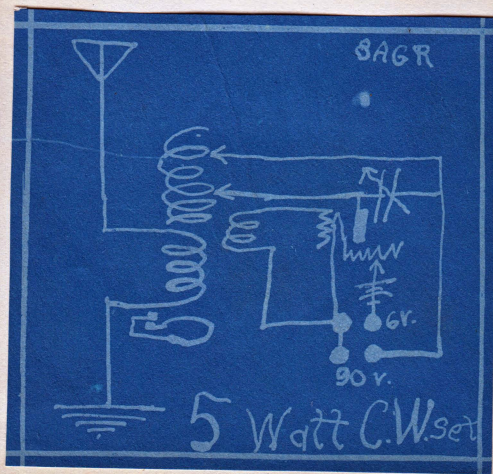
1.

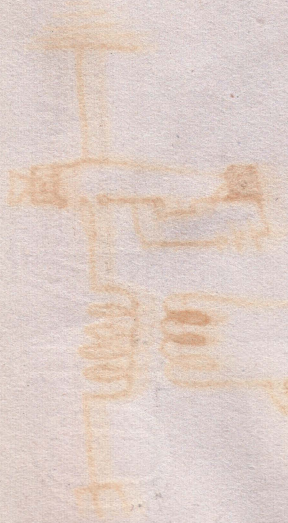


2-



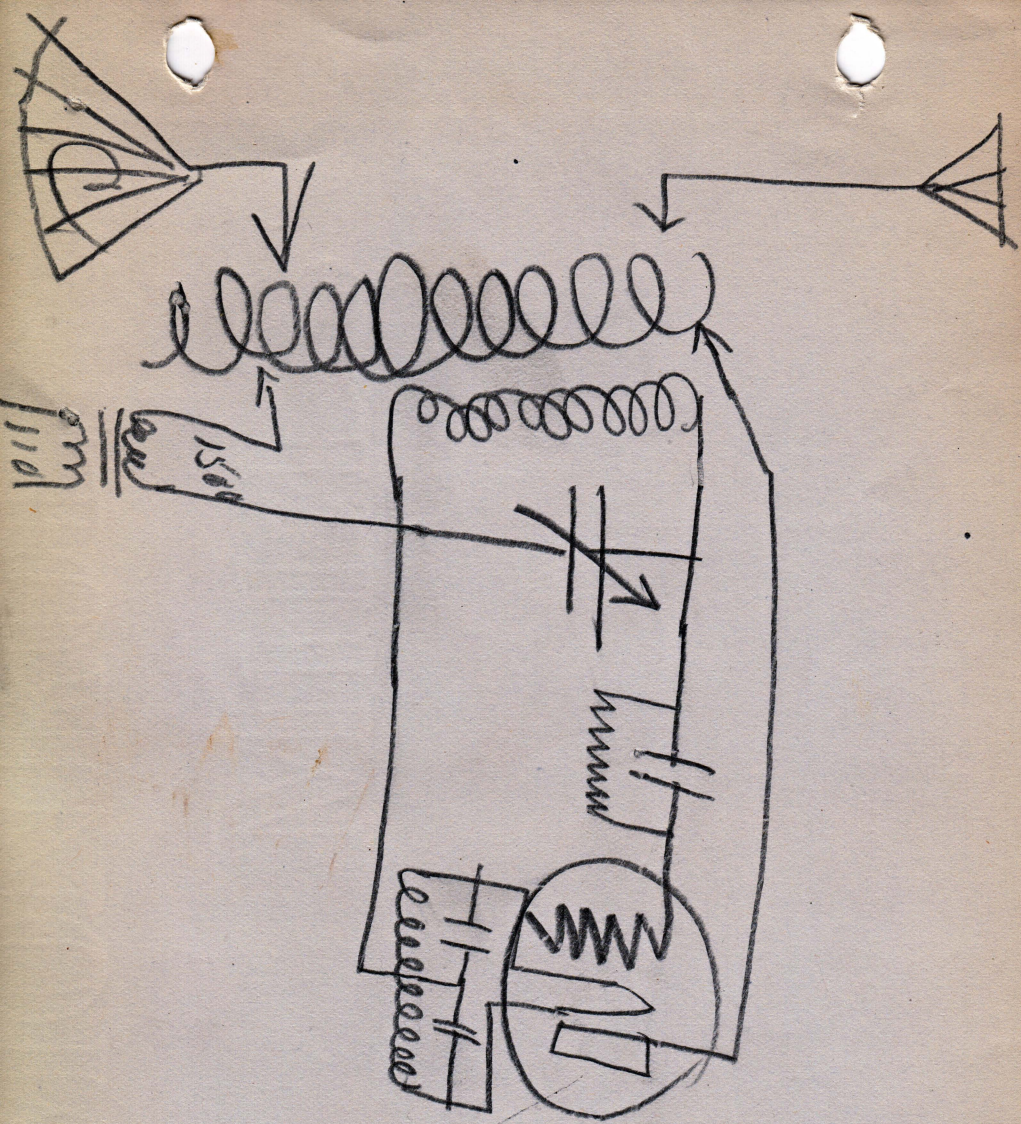
3-

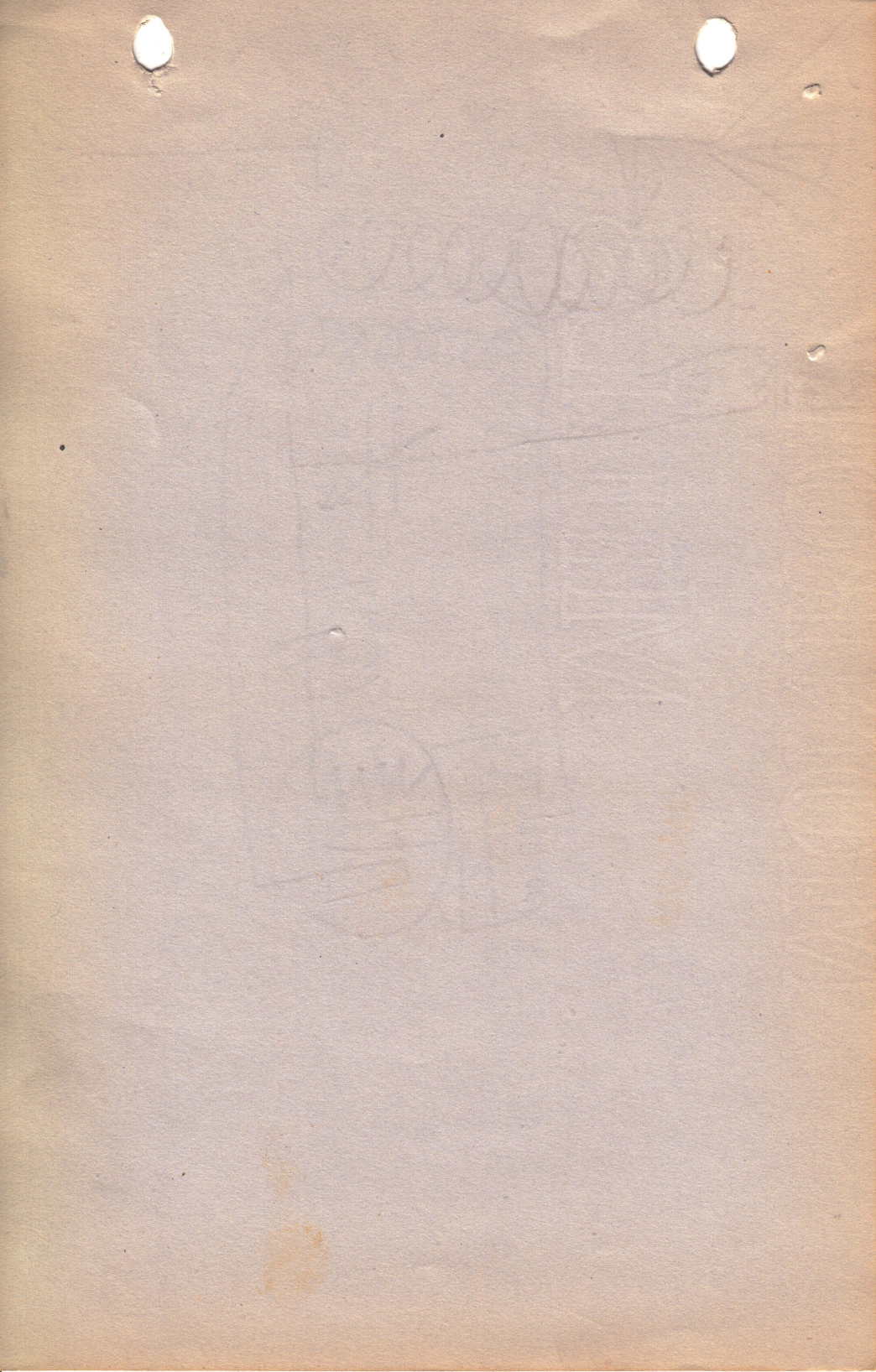


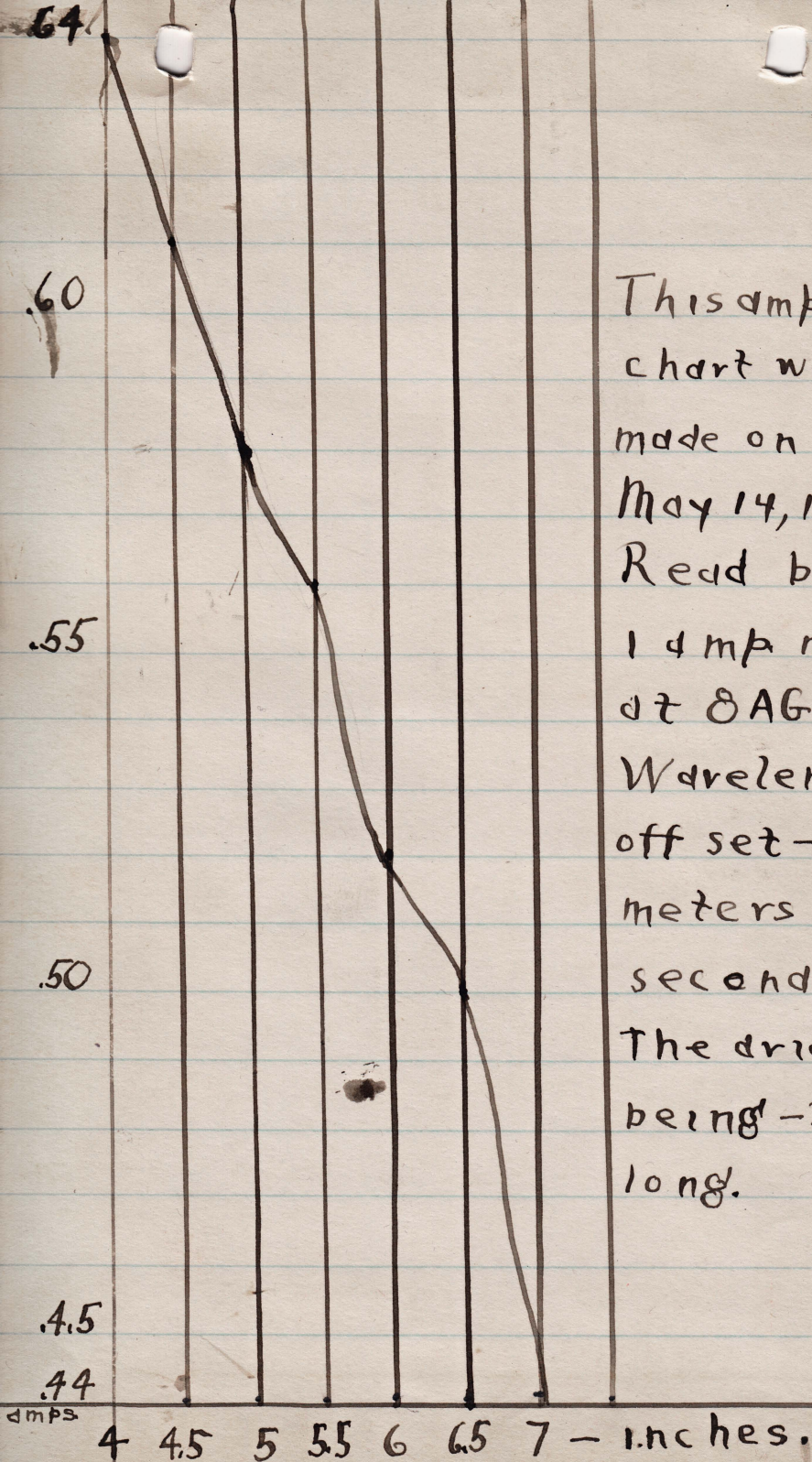


Handwritten text, possibly a label or title, which is mostly illegible due to fading.

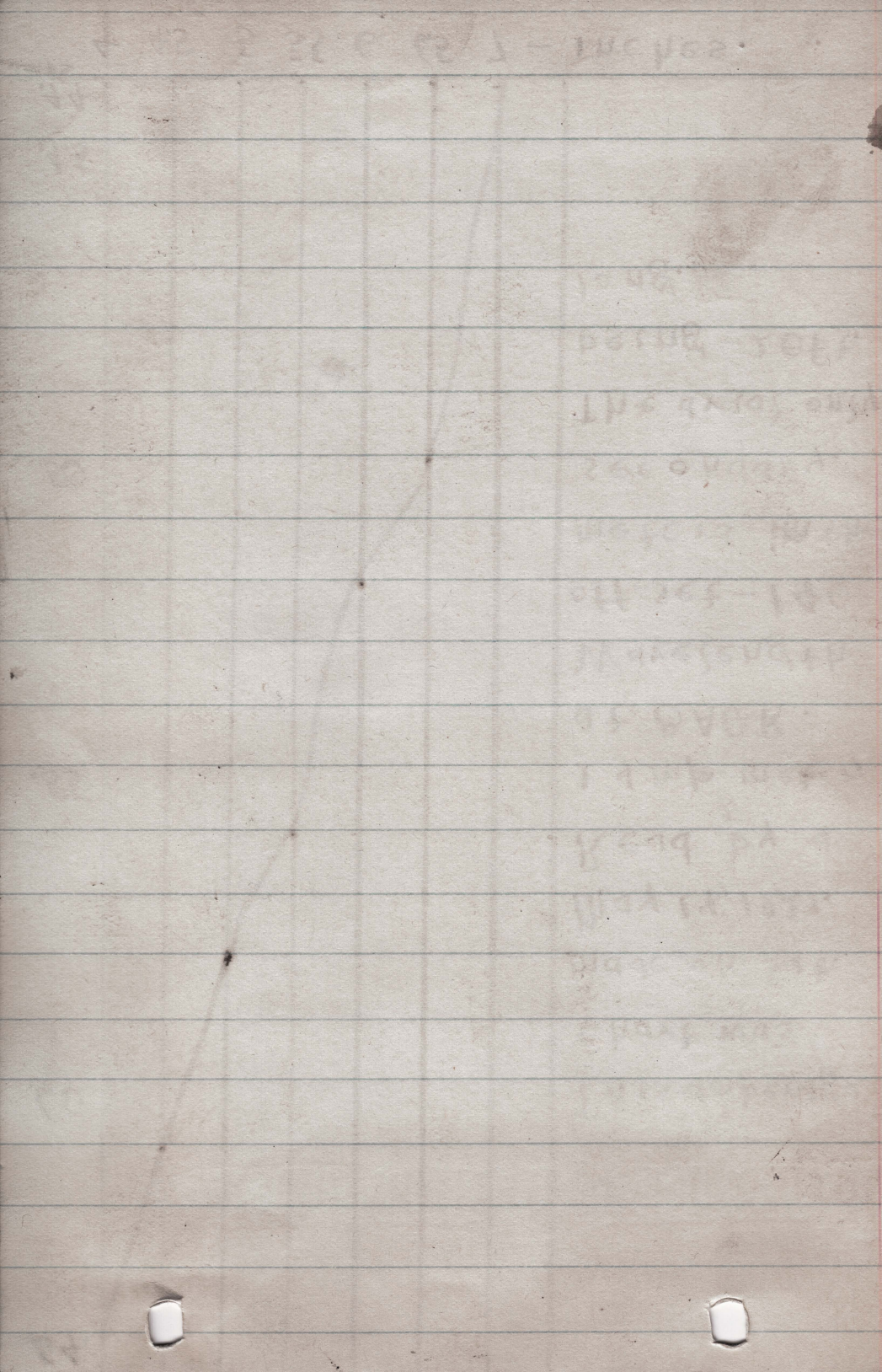








This amperage chart was made on Sat. May 14, 1921. Read by a 1 dmp meter, at 8 AGR. Wavelength off set - 140 meters in the secondary. The dial only being - 20 ft. long.



# Resistances of Wire

size. Ohms per 1000 Ft.

|    |   |   |          |
|----|---|---|----------|
| 1  | - | - | .12404   |
| 2  | - | - | .15640   |
| 4  | - | - | .24869   |
| 6  | - | - | .39546   |
| 8  | - | - | .62881   |
| 10 | - | - | 1.00000  |
| 12 | - | - | 1.58980  |
| 14 | - | - | 2.5278   |
| 16 | - | - | 4.0191   |
| 18 | - | - | 6.3911   |
| 20 | - | - | 10.1630  |
| 22 | - | - | 16.152   |
| 24 | - | - | 25.695   |
| 26 | - | - | 40.868   |
| 28 | - | - | 64.966   |
| 30 | - | - | 103.300  |
| 32 | - | - | 164.26   |
| 34 | - | - | 261.23   |
| 36 | - | - | 415.24   |
| 38 | - | - | 660.36   |
| 40 | - | - | 1,049.70 |

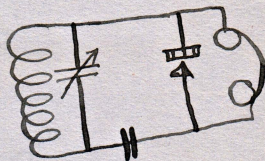
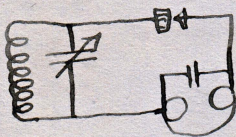
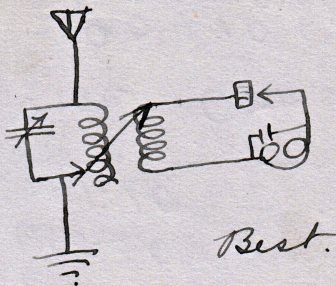
Big Wire - Ohms per 1000 Ft.

|      |   |   |         |
|------|---|---|---------|
| 0000 | - | - | 0.04906 |
| 000  | - | - | 0.06186 |
| 00   | - | - | 0.07801 |
| 0    | - | - | 0.09838 |

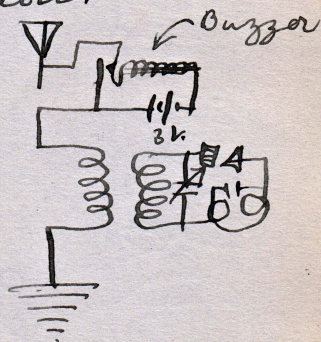
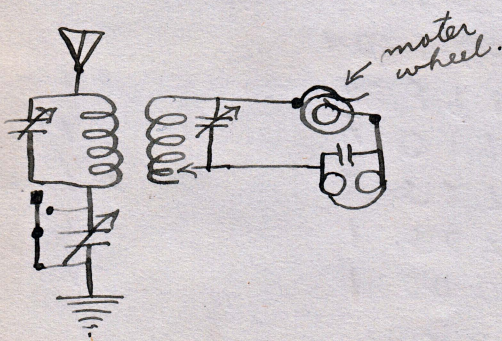


# Receiving Diagrams

Crystal-



Detector for undamped waves -  
without an audion.



# Resistances of Wire

Size

1

2

3

4

5

6

7

8

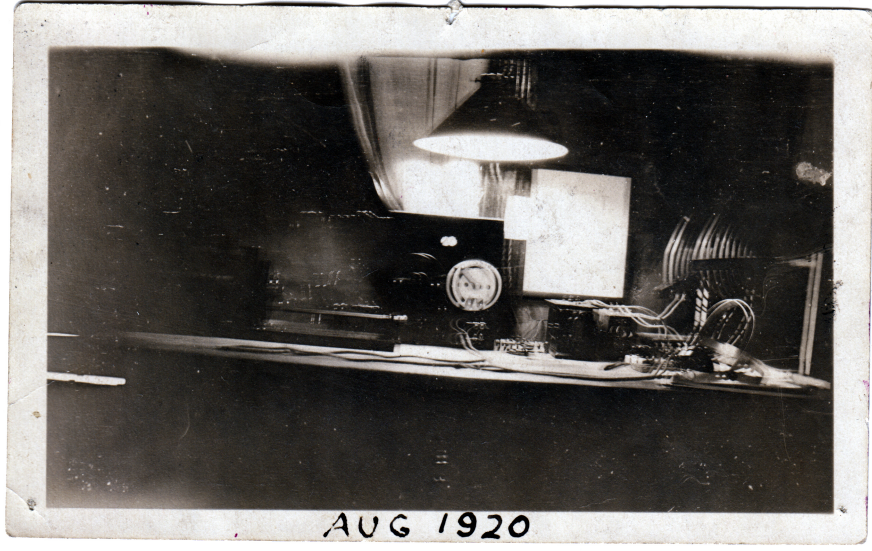
9

10

11

1

Audion Diagrams.



AUG 1920

abt aug. 1920

$2\frac{1}{2} \times 4$  page

---

x-act

30

1920 Amateur Radio Station 8AGR  
of Frank Dawson Biley  
Erie, Pennsylvania  
*Photo found in 1920-1925 Journal*

F. Dawson Bliley  
8<sup>th</sup> Grade

Whittier School.

~~1802 Grove St.  
Boulder Colo.~~

~~after June 1<sup>st</sup> 1921  
450 West 9<sup>th</sup> St.  
 Erie, Penna.~~

LOOSE **IP** LEAF

STUDENT'S NOTE BOOK Bolbs

PATENTED [Dec. 20, 1904  
Dec. 12, 1905

No. 8058

IRVING-PITT MFG. CO.  
KANSAS CITY, MO.

E. R. — ER 508521

Marcini — A 200088

Andiv. T. — 1112

GE — CG 1144

513

GE — CG 1144

649

9 A X T

8 a g r

8 A. G. R.

Sent cards

TO -

81Q

3QH

9A1Q - rec'd from 9HM

9UU

8ARD

9FS

9NE