

CROSS-SECTION

on I St. 25th to 27th and H St
25th to 27th Sts.

H. ST. 27TH TO 30TH. ST.

Alley bet 3d+4th+Walnut+Brooks

Alley between 24+25+D+E Sts.

23RD St. "B" to City Park

Levels over center & Curbs of

Batic-Batic St-F to 5th S. D.

X Section of Intersection
of Grant Ave with "N" St.

X Section of Triangle of
Julian & 21st.

City of San Diego Engineers Office
City of San Diego, Cal.
236
F.B. 236

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

MINUTES	LKS.	MINUTES	LKS.	MINUTES	LKS.
I	2 1/3	21	49	41	95 2/3
2	4 2/3	22	51 1/3	42	98
3	7	23	53 2/3	43	100 1/3
4	9 1/3	24	56	44	102 2/3
5	11 2/3	25	58 1/3	45	105
6	14	26	60 2/3	46	107 1/3
7	16 1/3	27	63	47	109 2/3
8	18 2/3	28	65 1/3	48	112
9	21	29	67 2/3	49	114 1/3
10	23 1/3	30	70	50	116 2/3
11	25 2/3	31	72 1/3	51	119
12	28	32	74 2/3	52	121 1/3
13	30 1/3	33	77	53	123 2/3
14	32 2/3	34	79 1/3	54	126
15	35	35	81 2/3	55	128 1/3
16	37 1/3	36	84	56	130 2/3
17	39 2/3	37	86 1/3	57	133
18	42	38	88 2/3	58	135 1/3
19	44 1/3	39	91	59	137 2/3
20	46 2/3	40	93 1/3	60	140

Return to City Engineers Office
City Hall, San Diego, Cal.
TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

MICROFILMED

Angle	COR. IN LINKS	Angle	COR. IN LINKS	Angle	COR. IN LINKS	Angle	COR. IN LINKS
0		0		0		0	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

2287.5
159
176.5

Return to City Engineers Office
City Hall, San Diego, Cal.

SS Hawaiian
Chas. H. Angier
L.C. + S.F.
7515
Feb. 13 1905
1

4 in. IIIII 9
IIIIIIIIII 19

6

8 IIIII IIIII IIIII 40
IIIIII III 19

10 III 5

12

16

Special 1

1

93
~~H. Boone~~

93

Shas N. Angus

S.S. Hawaiian

Feb 13 1905

A.J.S.F.
97570

4 in	 	24
	 	53
6		
8	 	10
	 	11
10	 	13
	 	5
12		
16		2

118

118
S.S. Hawaiian
2-13-05

106
S.S. Hawaiian
2-13-05

Shas N. Angus

S.S. Hawaiian

Feb 13 1905

A.J.S.F.
90352

4 in	 	13
	 	50
6		
8	 	5
	 	12
10	 	6
	 	7
12		
16		2
		1

106

106
S.S. Hawaiian
2-13-05

S.S. Hawaiian
Feb 14 1905
Lhas Ngair

A.J.V.J.F.
90416

4 in ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ 57

~~||||~~ 14

6

8 || 2

~~||||~~ |||| 19

10 ~~||||~~ |||| 12

12

16 ||| 3

Special III-86-

89

196

196
~~||||~~
2-14-05

S.S. Hawaiian
Feb 14 1905
Lhas Ngair

A.J.V.J.F.
92366

4 in ~~||||~~ || 17

~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ } 78

6

8

10 ~~||||~~ ~~||||~~ ~~||||~~ 21

|||| 4

12

16 ||| 3

~~3~~
123

123
~~||||~~
2-14-05

S.S. Hawaiian
Chas. H. Auger

A. J. S. F.
97535

Feb. 14, 1905

4 in

6

8

10

|||||

|||||

12

16

|||

Special |||||

67
H. Johnson
2-14-05

S.S. Hawaiian
Chas. H. Auger

A. J. S. F.
97040

Feb. 14, 1905

4 in

6

8

10

22

28

12

3

16

14

Special

67

Hand
J.S.

S.S. Hawaiian
Chas H. Auger Feb 14 1905

P.V. & N.E.
626

4 in ~~||||~~ |||

13

6

8

10 ~~||||~~

12

16 ~~||||~~ |

11

Special 111-24-11-

60
Holborn
2-11-05

60

S.S. Hawaiian
Chas H. Auger Feb 14 1905

A.J. & F.
94112

5

4 in ~~||||~~ |||

20

6

8

10 ~~||||~~ |||

12

16 |||

3

Special

~~32~~

1-4 damaged

32
Holborn
2-11-05

S.S. Hawaiian
Chas. Hanger
A.J.P.F.
97055
Feb. 14 1905
Feb. 15 1905

4 in ~~||||~~ (6) ~~||||~~

20

6

8 ~~||~~ (5)

5

10

12 ~~||~~ (3) ||

9

16

Special

(34)

34.
Boone
2/11-05

S.S. Hawaiian
Chas. Hanger
A.J.P.F.
94455
Feb. 15 1905

4 in ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~
~~||~~

44

5

6

8 ~~||~~

6

10

12 ~~||~~ ||

8

16 ||

3

Special ~~||~~ 52-1-25-||

88

(154)

154
Boone
2/11-05

S.S. Hawaiian
Chas. W. Auger
Feb. 15 1905
a.s.f.
91048

4 in IIIIIIIIIII

20

6

8 IIII

6

10 III

3

12 IIII

6

16 III

3

Special

38
Kobone
2/11-05

38

S.S. Hawaiian
Chas. W. Auger
Feb. 15 1905
a.s.f.
6301

4 in IIIIIIIIIIIIIII

19

6

8 IIIIIIIII

13

10 IIII
II

4

2

12 IIIIIIIII

13

16

Special III-77-

133.
Kobone
2/11-05

82
133

Chas H. Auger S.S. Hawaiian Feb 15 1905

A.J.P.F.
97071

4 in IIIII I

16

6

8

10 IIIIIII

14

12

16

Special

30.
Hobson
2-11-05

Chas H. Auger S.S. Hawaiian Feb 15 1905

A.J.P.F.
77574

9

4 in

6

8

10 III

12

16

Special

30

~~Vault~~

Levels on I St - 25th to 27th

4 (Dams)
13 (Hills)
05 (Chair)

10

6.29	134.81		128.52	S.L.	100' E of 25 th (12426)	4.5	119.9	
	E line of 25 th			N.L.		+0.6	125.0	
So. Line		6.2	128.6		125' E of 25 th			
C		5.0	129.8	N.L.		2.2	122.2	
No. Line		1.2	133.6	C.		4.7	119.7	
	25' E. 25 th			S.L.		7.6	116.8	
N.L.		2.8	132.0		150' E. 25 th			
S.L.		7.4	127.4	S.L.		10.9	113.5	
	50' E 25 th			C.		9.0	115.4	
S.L.		10.8	124.0	N.L.		6.3	118.1	
N.L.		4.9	129.9		175' E 25 th			
	75' E 25 th			N.L.		8.2	116.2	
N.L.		7.1	127.7	C.		12.0	112.4	
S.L.		12.7	122.1	S.L.		14.7	109.7	
T.P.	1.80	124.31	122.56	T.P.	1.48	113.32	12.52	111.84

200'E of 25th

(113.32)

S.L.	7.0
C.	3.4
N.L.	0.8

106.3	S.L.
109.9	C.
112.5	N.L.

225'E 25th

N.L.	4.5
C.	7.4
S.L.	9.3

108.8	N.L.
105.9	C.
104.0	S.L.

250'E 25th

S.L.	11.5
C.	9.5
N.L.	7.5

101.8	S.L.
103.4	C.
105.8	N.L.

275'E 25

N.L.	9.8
C.	11.3
S.L.	12.8

103.5	N.L.
102.0	C.
100.5	S.L.

300'E 25th

(113.32)

13.5	S.L.	99.8
12.3	C.	101.0
11.2	N.L.	102.1

325'E 25th

10.4	N.L.	102.9
10.1	C.	103.2
11.7	S.L.	101.6

350'E 25th

8.7	S.L.	104.6
8.6	C.	104.7
7.7	N.L.	105.6

375'E 25th

4.7	N.L.	108.6
4.2	C.	109.1
4.9	S.L.	108.4

11

			400' E 25 th (13.32)	
S.L			1.0	112.3
C			0.5	112.8
T.P.	13.00	125.70	0.62	112.70
N.L			11.0	114.7
			425' E 25 th	
N.L			5.8	119.9
C			6.4	119.3
S.L			7.6	117.1
			450' E 25 th	
S.L			3.4	121.3
C			3.3	122.4
N.L			2.6	123.1
T.R	12.49	137.15	7.04	124.66
			475' E 25 th	
N.L			11.4	125.8
C			11.0	126.2
S.L			11.2	126.1

12

			500' E of 25 th (137.15)	
S.L			7.9	129.3
C			8.3	128.9
N.L			8.6	128.6
			525' E 25 th	
N.L			4.6	132.6
C			3.1	134.1
S.L			3.7	133.5
T.P.	12.97	149.62	0.50	136.65
			550' E 25 th	
S.L			12.1	137.5
C			12.2	137.4
N.L			11.6	138.0
			563' C = W.L 26 th	
N.L			9.15	140.4
C			9.6	140.0
S.L			10.1	139.5

130 - Center of 26th
149.62

S.L.			6.0
C.			5.0
N.L.			4.5
T.P.	13.05	161.79	0.88
	E. Line 26 th		
N.L.			11.0
C.			13.6
S.L.			11.9
	25' E 26 th		
S.L.			8.2
C.			8.0
N.L.			7.6
	50' E 26 th		
N.L.			1.6
C.			2.6
S.L.			2.7
T.P.	13.12	174.49	0.42

75' E of 26th
(174.49)

143.6	S.L.	12.5
144.6	C.	11.0
145.1	N.L.	10.8
148.74		

100' E of 26th

	N.L.	7.1	167.4
150.8	C.	9.3	165.2 ✓
148.2 ✓	S.L.	8.5	166.0 ✓
149.7			

125' E 26th

	S.L.	6.6	167.9 ✓
153.6 ✓	C.	4.5	168.0 ✓
153.8 ✓	N.L.	6.4	168.1 ✓
154.2 ✓			

150' E 26th

	N.L.	2.0	172.5 ✓
160.2 ✓	C.	3.2	171.3 ✓
159.2 ✓	S.L.	2.2	172.3 ✓
159.1 ✓	T.P.	5.55	179.46
161.37		0.58	173.9 ✓

175' E of 26th
(179.40)

S.L.	4.9	174.6
C	5.5	174.0
N.L.	6.4	173.1

200' E 26th

N.L.	3.6	175.9
C	3.3	176.2
S.L.	2.3	177.2

225' E 26th

S.L.	2.2	177.3
C	2.5	177.0
N.L.	2.6	176.9

250' E 26th

N.L.	5.3	174.2
C	4.2	175.3
S.L.	3.5	176.0

S.L.	174.6
C	174.0
N.L.	173.1
N.L.	175.9
C	176.2
S.L.	177.2
S.L.	177.3
C	177.0
N.L.	176.9
N.L.	174.2
C	175.3
S.L.	176.0
T.P.	0.95

275' E 26th
(179.46)

S.L.	4.8	174.7
C	5.3	174.2
N.L.	7.0	172.5

300' E 26th

N.L.	9.9	169.6
C	8.6	170.9
S.L.	7.0	172.5

325' E 26th

S.L.	9.5	170.0
C	10.6	168.9
N.L.	12.0	167.5

350' E 26th

N.L.	14.0	165.5
C	12.7	166.8
S.L.	10.7	168.8
T.P.	0.95	167.97

14

S.L.	174.7
C	174.2
N.L.	172.5
N.L.	169.6
C	170.9
S.L.	172.5
S.L.	170.0
C	168.9
N.L.	167.5
N.L.	165.5
C	166.8
S.L.	168.8
T.P.	167.02

375' E 26th
(167.97)

S.L	1.3	166.7
C	3.8	164.2
N.L	4.4	163.6
410' E 26 th		
N.L	6.9	161.1
C	5.9	162.1
S.L	3.4	164.6
425' E 26 th		
S.L	5.6	162.4
C	7.9	160.1
N.L	9.4	158.6
450' E 26 th		
N.L	12.6	153.4
C	10.3	157.7
S.L	6.9	161.1

475' E 26th
147.97

S.L	9.4	158.6
C	12.6	155.4
T.P	1.13	156.86
N.L	12.24	155.73
	4.8	152.1
		156.1
500' E 26 th		
N.L	8.7	148.2
C	4.3	152.6
S.L	10.3	156.90
525' E 26 th		
S.L	1.1	155.8
C	6.6	150.3
N.L	11.9	145.0
550' E 26 th		
N.L	15.4	141.5
C	7.9	149.0
S.L	1.5	155.4

		575 E. 26 th		
		156.86		
S.L		1.5	1	155.4
C.		9.4		147.5
N.L		(145.6)	6.8	138.8
		+602 W.L 27 th		
S.L		2.5		154.4
C		10.7		146.2
N.L		(146.5)	8.5	137.1
		+300 C of 27 th		
S.L		6.2		150.7
C		14.0		142.9
N.L		(146.5)	11.4	134.2
T.P.	1.63	146.50	11.99	144.97
		E. Line 27 th		
S.L		0.7		146.9
C		6.8		138.8
N.L.		14.1		131.5
T.P.		9.18		137.32

1/2 Day's levels on "H" 5+25th to 27th
 13) 1300 hrs
 15) 1200 hrs

	7.79	164.01		156.72
		E Line 25 th		
N.L.		4.4		159.6
C.		6.8		157.2
S.L.		8.5		155.5
		25 E 25 th		
S.L.		5.9		158.1
O		2.5		161.5
N.L.		4.0		160.0
		50 E 25 th		
N.L.		5.0		159.0
C.		7.5		156.5
S.L.		10.5		153.5
T.P.	3.07	153.87	13.21	150.80

17

		75 E 25 th		
		153.87		
		6.5		147.4
		+0.2		153.90
		+1.6		155.5
		100 E 25 th		
		+0.1		154.0
		3.7		150.2
		11.4		142.5
		125 E 25 th		
		15.3		138.6
		7.3		146.6
		1.5		152.4
		150 E 25 th		
		13.0		140.9
		13.3		140.6
T.P.	1.02	142.73	12.16	141.71
S.L.		9.7		134.0

S.L.

175' E of 25th
(102.733)

12.4

130.3

C

9.0

134.7

N.L.

6.2

136.5

200' E of 25th

N.L.

11.4

131.3

C

13.8

128.9

S.L.

16.0

126.7

T.P.

0.67

131.14

12.26

130.47

225' E 25th

S.L.

6.8

124.3

C

6.2

124.9

N.L.

4.0

127.1

250' E 25th

N.L.

8.0

123.1

C

9.5

121.6

S.L.

11.4

119.7

T.P.

4.14

122.82

12.46

118.68

18

275' E of 25th
(122.82)

S.L.

5.6

117.2

C

4.0

118.8

N.L.

3.2

119.6

300' E of 25th

N.L.

7.1

115.7

C

8.1

114.7

S.L.

8.7

114.1

325' E 25th

S.L.

10.4

112.4

C

10.4

112.4

N.L.

8.9

113.9

350' E of 25th

N.L.

6.8

116.0

C

8.8

114.0

S.L.

12.0

110.8

375' E of 25th
(122.82)

S.L.		6.3	116.5
C		5.6	117.2
N.L.		0.6	122.2
T.P.	11.30	0.21	122.61
N.L.			
N.L.			
C.		6.1	127.8
S.L.		9.1	124.8
		11.0	122.9
S.L.			
C		5.9	128.0
N.L.		4.2	129.7
T.P.	12.55	1.3	132.6
N.L.		0.25	133.66
C		8.1	138.1
S.L.		10.3	135.9
		15.2	131.0

400' E 25th

425' E 25th

450' E 25th

475' E 25th
(146.21)

S.L.		11.4	134.8
C		6.0	140.2
N.L.		3.9	142.3
N.L.		0.0	146.2
C		1.8	144.4
S.L.		7.2	139.0
S.L.		2.4	143.8
T.P.	13.03	1.30	144.91
C		10.5	147.4
N.L.		7.60	150.9
N.L.		3.5	154.4
C		5.2	152.7
S.L.		9.8	148.1

500' E 25th

525' E 25th

550' E 25th

150' E of 26th
(181.75)

S.L.	6.5	175.3
C.	5.6	176.2
N.L.	4.1	177.7

175' E 26th

N.L.	4.9	176.9
C.	6.0	175.8
S.L.	6.8	175.0

200' E. 26th

S.L.	6.4	175.4
C.	6.5	175.3
N.L.	6.9	174.9

225' E. 26th

N.L.	11.5	170.3
C.	10.5	171.3
S.L.	8.5	173.3

250' E 26th
181.75

S.L.	12.4	169.4
T.P.	0.57	169.70
C.		12.62
		2.8
		166.9

N.L.

4.7

165.0

275' E 26th

N.L.	9.1	160.6
C.	8.0	161.7
S.L.	3.4	166.3

300' E. 26th

S.L.	6.9	162.8
C.	11.3	158.4
N.L.	13.0	156.2

397

161.71

325' E 26th

T.P.	11.91	157.74
N.L.	9.1	152.6
C.	5.9	155.8
S.L.	2.1	159.6

350' E of 26th
(14171)

N.L.		12.1	149.6
C.		8.0	153.7
S.L.		1.8	159.9 ^v

375' E 26th

S.L.		5.4	156.3
C.		10.0	157.7
N.L.		14.9	146.8

T.P.	4.68	153.19	13.2	148.51
N.L.		400' E 26 th	11.0	142.2
C.			5.2	148.0
S.L.			2.0	149.2

425' E 26th

S.L.		7.0	146.2	
C.		9.0	144.2	
N.L.		15.1	138.1	
T.P.	2.74	142.65	13.28	139.91

450' E of 26th
(14265)

N.L.		9.7	✓ 133.0
C.		3.2	✓ 139.4
S.L.		1.9	✓ 140.8

475' E 26th

S.L.		7.9	✓ 134.8
C.		8.5	✓ 134.2
N.L.		15.7	✓ 127.0

T.P.	1.25	131.46	12.44	130.21
N.L.		500' E 26 th	8.9	X 122.6
C.			3.5	X 128.0
S.L.			2.3	✓ 129.2

525' E 26th

S.L.		6.8	✓ 124.7	
C.		8.7	✓ 122.8	
N.L.		12.2	✓ 119.3	
T.P.	4.71	124.01	12.16	119.30

550'E 26th
inhal.

N.L. 8.8 115.2

C. 4.7 119.3

S.L. 1.4 122.6

57.5'E 26th

S.L. 4.7 119.3

C. 10.7 113.9

N.L. 11.9 112.1

587'E 26th

N.L. 14.1 109.4

600'WL 27th

N.L. 13.0 111.0

C. 13.2 110.8

S.L. 10.4 113.6

+14 E of WL 27th

C. 15.8 108.2

130-Gr of 27th
(24.0)

S.L. 14.9 109.1

C. 13.0 111.0

N.L. 18.5 115.5

15'W of EL 27th

S.L. 16.8 107.2

E.L. 27th

N.L. 1.8 122.2

C. 9.7 114.3

S.L. 14.5 109.5

15'

Levels over H 54-27630

782	165.06	
E. line 30	152.24	
Ctr Line		
W. Line		
25 West		
50 "		
75 "		
T.P.	0.83 153.94	11.95
75 "		
100 "		
125 "		
150 "		
175 "		
T.P.	2.87 144.00	12.81
175 "		
200 - E.L. 31 st		
		5.62
Ctr Line		

B.M.
157.24

153.11

141.33

138.38

18 } Levels
15 } Brooks
Maslam

No	Elev.	CTR	Elev.	So.	Elev.
4.8	160.2	4.5	160.5	5.6	159.4
7.5	157.5	5.1	159.9	4.1	160.9
9.5	155.5	7.6	157.4	6.0	159.0
11.7	153.3	9.3	155.7	7.5	157.5
13.1	151.9	10.3	154.7	8.6	156.4
		12.3	152.7	11.4	153.6
4.2	149.7				
6.6	147.3	3.9	150.0	3.1	150.8
8.5	145.4	7.1	146.8	6.2	147.7
11.0	142.9	9.0	144.9	8.8	145.1
		11.7	142.2	12.3	141.6
5.2	138.8				
10.9	133.1	6.9	137.1	5.6	138.4
				11.9	132.1

25

B.M. P19 S.E. Cor 318 H.

15

H 57
14400

	1.08	132.23	12.85	131.15
CTR Line 31				
W. Line "				
25' W				
T.P	0.61	120.83	12.01	120.22
25' W				
28 "				
38 "				
41 "				
50 "				
60 "				
75 "				
80 "				
T.P	2.38	114.03	9.18	111.65
100 "				
110 "				
125 "				
135 "				

19 } Dams
05 } Brooks
Haslam

26

No	Elev.	CTR.	ELEV	S.0	ELEV
7.0	128.2	3.9	128.3		3
12.9	119.3	10.1	122.1	7.7	124.5
				11.3	120.9
5.2	115.6	3.0	117.8		
5.8	115.0				
6.8	114.0				
8.3	112.5				
8.4	112.4	5.6	115.2	4.2	116.6
				5.1	115.7
11.3	109.5	11.7	109.1	8.5	112.3
				10.0	110.8
7.2	106.8	7.3	106.7	6.0	108.0
		9.0	105.0		
5.8	108.2	7.7	106.3	8.3	105.7
				9.9	104.1
				9.2	104.8

150' W of 31
 175' "
 E. Line 30
 T.P. 12.97 124.76 2.24
 175' W of 31
 E. Line 30th
 CTR "
 W. Line "
 T.P. 11.75 134.43 2.08
 CTR 30th
 W. Line "
 T.P. 11.74 145.53 0.64
 20' W of CTR
 W. Line 30th
 25' W "
 50' "
 75' "
 T.P. 9.78 154.98 0.33

H 54
 114.03

111.79
 122.68
 133.79
 145.2

27

No	CTR	So.
2.6	112.4	5.9 108.1 8.8 105.2
		2.5 111.5 7.5 106.5
		5.0 109.0
9.5	115.2	
3.9	120.8	10.3 114.4
		3.8 120.9 10.8 114.0
		1.2 123.5
2.0	132.4	
		4.3 130.1
8.6	136.9	
6.5	139.0	
3.4	142.1	10.4 135.1 16.7 128.8
		5.3 140.2 10.0 135.5
		4.0 141.1

H St
 132.97'
 0.86 120.96' 12.87 120.10'
 150' W 29th
 161 " "
 175 "
 186 "
 200' E.L. 28th
 T.P. 5.67 114.16' 12.47 108.44'
 21' W of E.L. 1170 28th
 Ctr. = 38.5 W of E.L. (Sta. 15 77' wide)
 48' W of E.L.
 52 " " "
 54 "
 60 " " "
 67 " " "
 72 " " "
 W. Line 28th
 25' W

29

No	Ctr	S.
2.9	118.1	3.4 117.6 2.4 118.6
6.3	114.7	
9.4	111.6	9.1 111.9 6.7 114.3
		10.0 112.0
13.1	107.9	13.7 107.3 11.8 109.2
9.8	104.4	
9.0	105.2	10.7 103.5 10.5 103.5
10.7	103.5	
12.0	102.2	12.4 101.8
9.8	104.4	14.0 100.2
		10.9 103.3 12.6 101.6
		12.8 101.4
		10.5 103.7
8.7	105.5	10.3 103.9 11.3 102.9
4.5	109.7	6.6 107.6 9.6 104.6

US

H 57

114.16

30

50' W 28^m
T.P. 13.14 124.25' 1.05

113.11

50' W

Ni CHT 8.6 117.7 10.5 115.8

75' "

0.1 126.2 4.2 122.1 9.3 117.0

T.P. 13.04 136.81' 2.48

123.77

100. "

5.8 131.0 9.3 127.5 13.5 123.3

T.P. 10.33 147.04' 0.10

136.71

125. "

9.7 137.3 14.0 133.0 18.6 128.4

150. "

3.7 143.3 7.0 140.0 12.5 134.5

175. "

0.0 147.0 2.5 144.5 7.1 139.9

200. " 12.86 158.32' 1.58

145.40

200. "

6.1 152.2 9.1 149.2 ~~156.6~~

225. "

2.7 155.6 6.0 152.3 8.8 149.5

250. "

2.2 156.1 5.8 152.5

275. "

3.6 154.7

300. "

2.3 156.0

T.P. 12.53 169.96' 0.89

157.43

250. "

9.0 161.0

18 H 57

145.37

550' West 28
T.P. 0.26 133.89 11.74

133.63

525 "

550 "

575 "

E. Line 27th

T.P. 0.39 121.61 12.67

121.22

550 W.

575 W.

E. Line 27th

No. Ctr. So.

11.5 133.9

8.0 125.9

6.8 127.1

6.4 127.5 13.1 120.8

12.7 121.2

11.7 119.9

8.4 113.2

8.5 113.1 13.1 108.5

142.27

450 E of 26

475 "

T.P. 0.79 130.13 12.93

475 "

500 "

525 "

550 "

T.P. 1.11 119.11 12.13

550 "

575 "

587 "

W.L. 27th

14' E of W.L.

Chr line 27th

45 E of W.L.

129.34

118.00

50 Chr No

1.4 140.9 2.9 137.4 9.4 132.9

7.4 134.9 8.0 134.0

3.1 127.0

1.1 129.0 0.5 129.6 6.6 123.5

5.4 124.7 7.6 122.5 10.7 119.4

8.5 121.6 12.1 118.0

4.9 114.2

0.9 118.2 6.8 112.3 7.9 111.2

6.4 112.7 8.9 110.2 10.7 108.4

8.9 110.2 8.9 110.2

11.7 107.4

10.9 108.2 9.3 109.8 4.7 114.4

13.0 106.1

Levels over side lines of Alley bet
3rd & 4th Walnut & Brookes

85
84
83
Claws
Brooks
Hudson

34

				W.		E	
	3.15	291.78					
No. 1172 Walnut				6.1	285.7	5.8	286.0
3' No "				5.3	286.5	5.1	286.7
24 " "				—	37 288.1	Top of F.T. Ctr of Alley	
50 " "				5.3	286.5	5.0	286.8
100 " "				4.8	287.0	4.3	287.5
150 " "				4.5	287.3	4.4	287.4
200 " "				4.4	287.3	4.0	287.8
250 " "				4.0	287.8	3.8	288.0
300 " "				3.7	288.1	3.4	288.4
T.P.	3.53	291.77	3.54		288.24	Top of M.H. 310' No of Walnut in Ctr of Alley	
350 " "				3.4	288.4	3.0	288.8
400 " "				3.1	288.7	2.9	288.9
450 " "				2.8	289.0	2.5	289.3
500 " "				2.7	289.1	3.0	288.8
550 " "				5.0	286.8	4.5	287.3
598 " "				9.2	282.6	{	9.0 282.8
600 " = 50. line Brookes.				9.7	282.1		10.0 281.8
2' No " "				10.3	281.5		
				281.6	121 34 Brooks		

Levels over center line of Alley
 bet 24th & 25th, DYE ^{by} ¹² Gary
²⁴ Brooks
²⁵ Haslow

35

	9.24	183.37		174.13
-30 - Ctr of 24 th St			10.5	172.9
00 - E. Line "			9.8	174.6
50' E of "			5.8	177.6
100 "			3.9	179.5
150 "			2.4	181.0
T.P.	10.18	192.05	1.50	181.87
200 "			8.9	183.15
250 "			7.4	184.7
300 "			6.3	185.2
350 "			5.4	186.7
400 "			4.6	187.5
450 "			3.4	188.7
500 "			2.4	189.7
550 "			1.5	190.6
600 " = W.L. 25 th			5.5	186.6
+50 - Ctr "			6.0	186.1

Levels over Ctr. Line of 23rd St
 from Ctr of B St to So. Line of City Park

Distance	BM 244B	Level	Height	BM 244B	Level	Height	Level		
							132.64		
0.08	179.87			179.79	100	No. line of "A"	1.1	131.5	
1.85	168.87	12.95		167.02	13	"	4.1	128.5	
-30	Ctr of "B" St	5.0		163.9	25	"	7.9	124.7	
00	No Line	5.3		163.6	33	"	{ 11.3 13.9	121.3 118.7	
50	"	5.6		163.3	38	"	16.3	116.3	
100	"	4.9		164.0	46	"	16.6	116.0	
150	"	4.2		164.7	48	"	13.9	118.7	
200	"	3.6		165.3	50	"	13.7	118.9	
250	"	3.4		165.5	75	"	8.3	124.3	
300	So. Line A	5.5		163.4	100	"	1.6	131.0	
+14		7.7		161.2	T.P.	9.61	141.29	0.96	131.68
+25		12.3		156.6	125	"	3.8		137.5
T.P.	0.49	157.26	12.10	156.77	130.7	So. line of Park	2.3		139.0
+40	Ctr "A"	8.0		149.3		Park Line is 116.7 No. of "A"			
T.P.	0.19	145.03	12.42	144.84					
+60		5.5		139.5					
T.P.	0.22	132.64	12.61	132.42					

Levels over Curbs on 9th St

bet A and Ash $\frac{2}{5}$ } 2 Dams
 $\frac{1}{5}$ } 1 Burbs
 $\frac{1}{5}$ } 1 Haslam

	0.31	108.03		107.72
		W	E	
50.1100 Ash	1.06	106.97	4.04	103.99
50' 50 "	2.54	105.49	5.48	102.55
100 " "	4.05	103.98	7.0	101.03
150 " "	6.14	101.89	8.51	99.52
200 " "	10.38	97.65	13.00	95.03
TIP	0.45	95.49	13.00	95.03
250' "	2.12	93.36	5.05	90.43
No. 1170 A	6.51	88.97	9.50	85.98



Levels over Bitumen Walk in Univ Ave
in front of Sisters Hospital.

	4.81	288.35	283.54
0° E Line 6 th		5.64	282.71
+50		5.43	282.92
1		5.30	283.05
+50		5.21	283.14
+90° End Bit. Walk.		5.28	283.07

Sidewalks on Univ Ave

190' of Bitumen walk in commencing
at 6th St - remainder in cement
walk to west line 8th St on North
side Univ Ave

140' cement sidewalk in - beginning
at 6th - on South side.

Levels over Wood Pipe in Univ Ave
from 6th to 8th

39

			288.35				
W.L. 6 th					8.0		280.35
E.L. 6 th					8.06		280.29
+50					7.43		280.92
1					7.37		280.98
+50					7.40		280.95
2					7.60		280.75
+50					7.20		281.15
3 W.L. 7 th					7.20		281.15
T.P.	4.40	288.40		4.35			284.00
Ch 7 th					7.28		281.12
E.L. 7 th					6.95		281.46
+50					6.62		281.78
1					6.50		281.90
+50					6.32		282.08
2					6.33		282.07
+50					6.63		281.77
3 SW. L. 8 th Po. side Univ					6.72		281.68
E.L. No							

Levels over Ctr. line of 8th St.
University to Robinson

TP.	4.05	286.61	5.84	282.56
0-5.L Univ.			3.6	283.01
+50			4.0	282.61
1			5.3	281.31
+50			5.8	280.8
2			5.7	280.9
+50			5.9	280.7
3			6.1	280.5
+50			6.0	280.6
4			7.3	279.3
+44 = No. 1172 Robinson			7.8	278.8

Levels over Ctr. line 7th St front
University to Robinson

40

	2.11	286.11		284.0
0-5.L Univ.			2.8	283.3
+50			3.8	282.3
1			4.1	282.0
+50			4.4	281.7
2			4.7	281.4
+50			5.7	280.4
3			6.5	279.6
+50			7.7	278.4
4			8.5	277.6
+44			9.6	276.5

Plat

Levels over Curb lines & Ctr
of Balic-Balic St - F to 50' 50' D

	0.29	184.45		184.16
	0.42	172.14	12.73	171.72
	0.30	160.19	12.25	159.89
	No line "F"			
W. Cl		11.2		149.0
ctr		11.5		148.7
E Cl.		12.2		148.0
	50' No "F"			
E Cl		10.5		149.7
Ch		9.7		150.5
W. Cl.		9.8		150.4
	100' No F			
W Cl		8.5		151.7
Ch		8.3		151.9
E Cl		8.8		151.4
	150' No F			
E Cl		7.2		153.0
Ch		7.2		153.0
W. Cl		7.1		153.1

	200' No "F"			
W Cl.		5.6		154.6
Ch		5.8		154.4
E Cl.		5.6		154.6
	250' No "F"			
E Cl		3.9		156.3
Ch		4.3		155.9
W. Cl.		4.4		155.8
	300' No "F" = Soline "E"			
W Cl.		3.1		157.1
Ch		2.6		157.6
E Cl.		2.1		158.1
	No line E			
E Cl.		0.2		160.0
Ch		0.5		159.7
W. Cl		1.2		159.0
T.P.	13.76	171.92	10.3	159.16

171.92

50' N^o E

W.C.	10.5	161.4
Ch	9.7	162.2
E.C.	9.1	162.8

100' N^o E

E.C.	6.7	165.2
Ch	7.3	164.6
W.C.	8.1	163.8

150' N^o E

W.C.	5.6	166.3
Ch	5.0	166.9
E.C.	4.1	167.8

200' N^o E

E.C.	1.4	170.5
Ch	2.2	169.7
W.C.	3.2	168.7

T.P.	352	174.81	0.63	171.29
------	-----	--------	------	--------

42

250' N^o E

W.C.	3.9	170.9
Ch	2.6	172.2
E.C.	1.8	173.0

2'50 of So Rail

So. line Grant Prod. EL 25 th	3.7
Ch	3.6
1/4	3.8
C	3.2
1/4	3.2
Ch	2.9
N.L. Grant Prod	2.6

+31.8 = 2' No of No Rail

N.L. Grant Prod.	2.7
Ch	2.9
1/4	3.0
C	3.2
1/4	3.3
E. line 25 th	3.4

+193 = No 1/4 "N" St

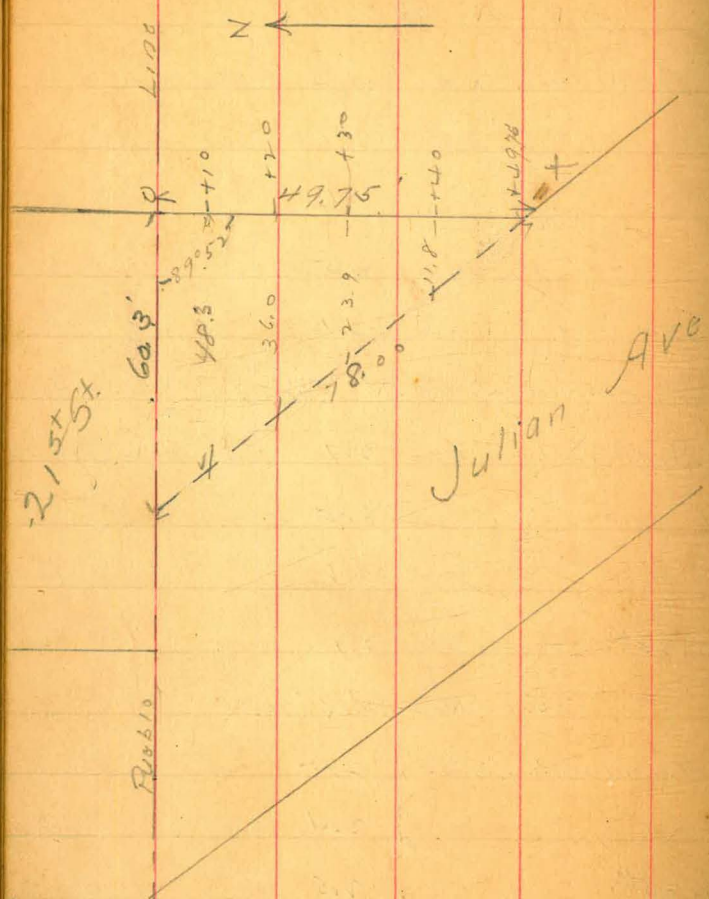
53.5	N.L. Grant Prod.	4.2	53.0
53.6	Ch	2.1	53.1
53.4	1/4	3.6	53.6
54.0	C	3.5	53.7
54.0	E. line 25 th Prod.	3.1	54.1

+26.6 = No Ch "N" St

54.6	N.L. Grant Prod.	2.7	54.5
	Ch	2.5	54.7
55.5	1/4	2.6	54.6
54.3	E. line 25 th	2.9	54.8

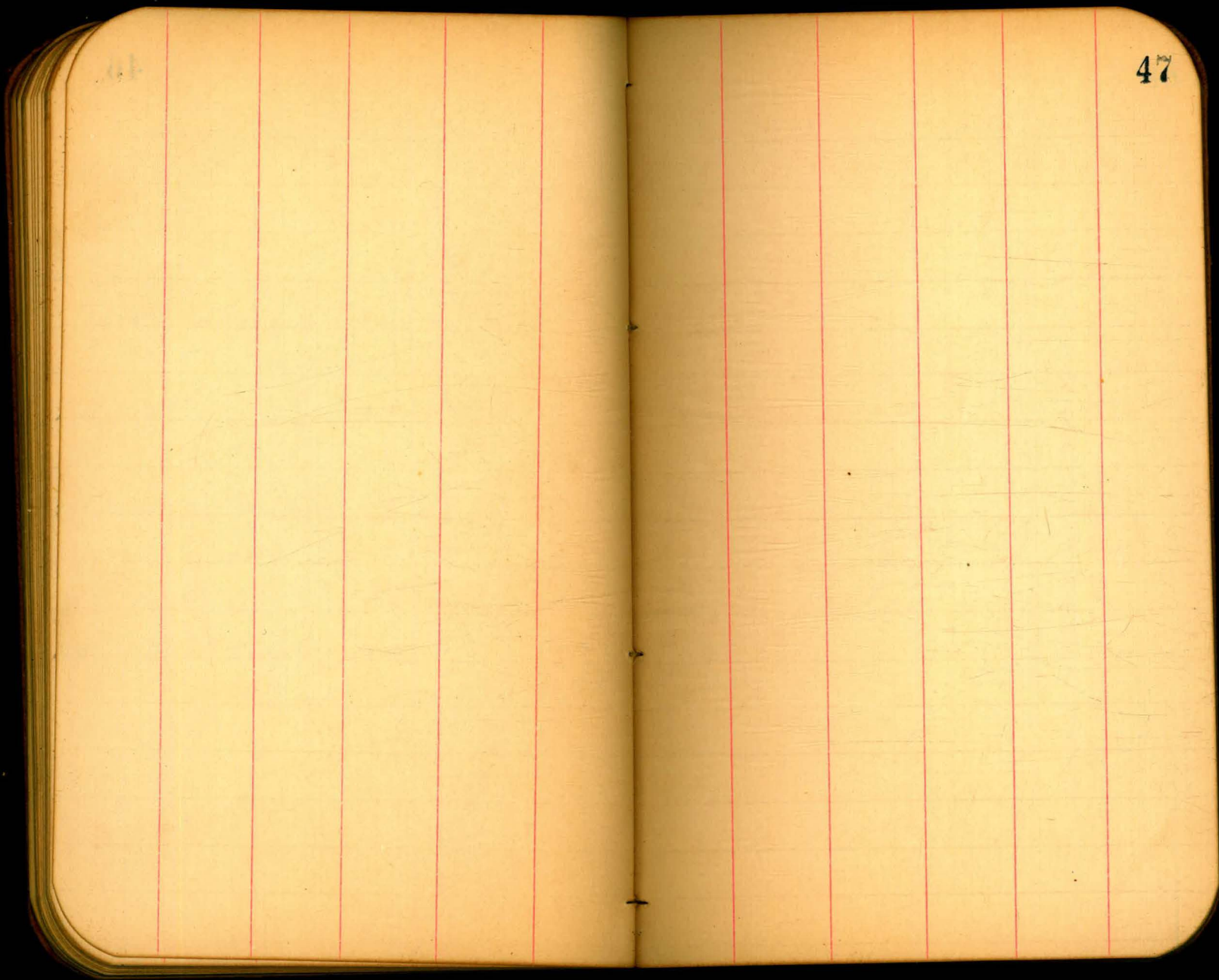
+25.6 = No Line "N" St

54.0	Int of N.L. Grant with N.L. "N" St	2.5	54.7
53.9	Ch	2.4	54.6
53.8	E. line 25 th	2.5	54.7

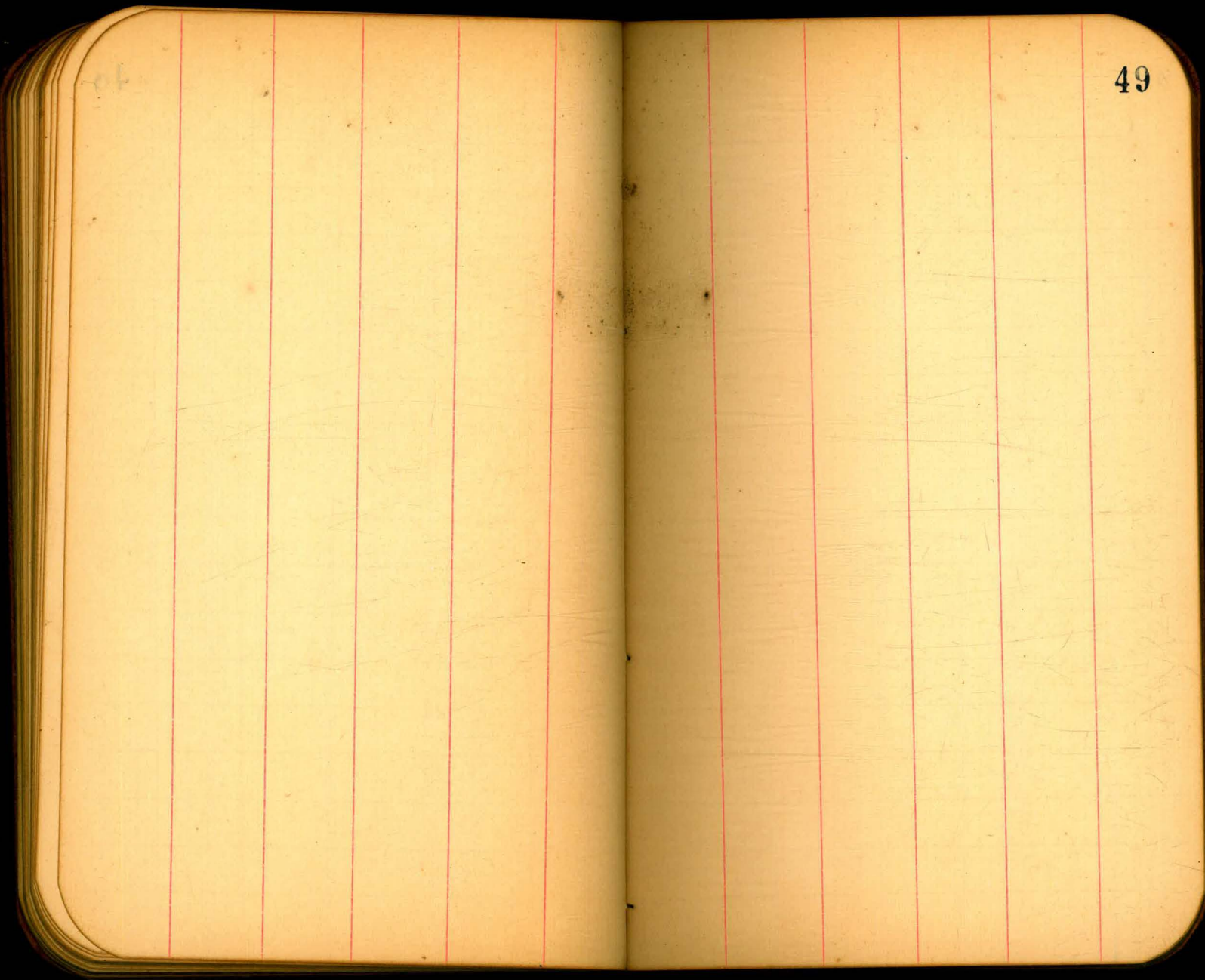


3.24	45.42		42.18
1.60	36.26	10.76	34.66
	Pueblo	1170	
E line 21 st		2.6	33.7
Ch.		2.4	33.9
1/2		2.3	34.0
Ch.		1.8	24.5
1/2		2.8	33.5
60.3' N of E.L. - N.L. Julian		3.7	32.6
10.5' P.L.			
E.L. 21 st .		2.7	33.6
Ch.		2.7	33.8
1/2		2.8	33.5
Ch.		2.6	33.7
48.3' N of E.L. 21 st - N.L. Julian		2.9	33.4

	36.26		
	20' So P.L.		
E.L. 21 st	3.0		33.3
Ct	3.2		33.1
W	3.4		32.9
36.0' W 21 st = N.L. Julian	3.4		32.9
	30' So P.L.		
E.L. 21 st	3.7		32.6
Ct.	3.8		32.5
23.9' W + E.L. 21 st N.L. Julian	3.7		32.6
	40' So P.L.		
E.L. 21 st	4.6		31.7
11.8' W + E.L. 21 st N.L. Julian	4.2		32.1
	49.75' So. P.L. Int Julian with 21 st		
X	7.4		28.9



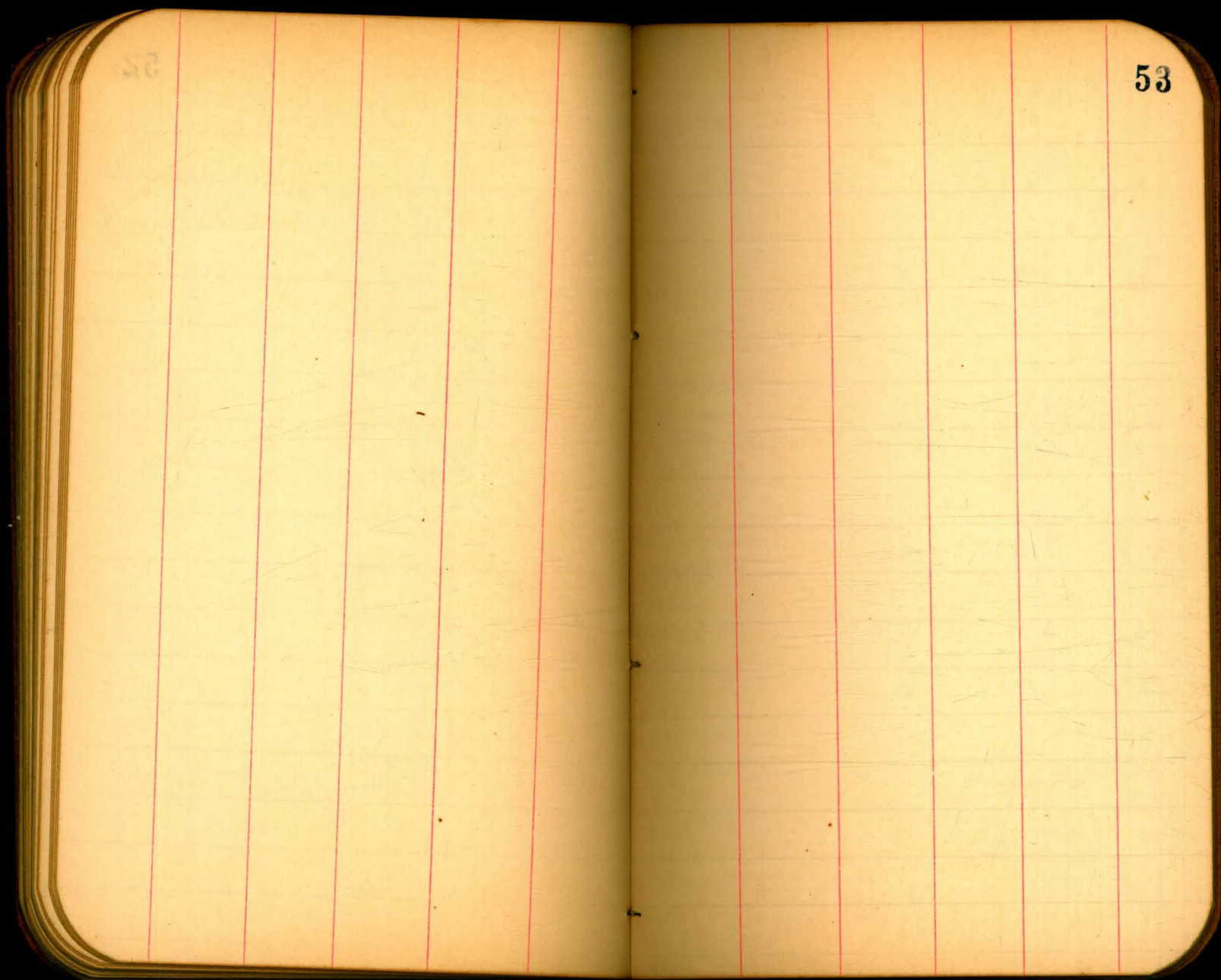
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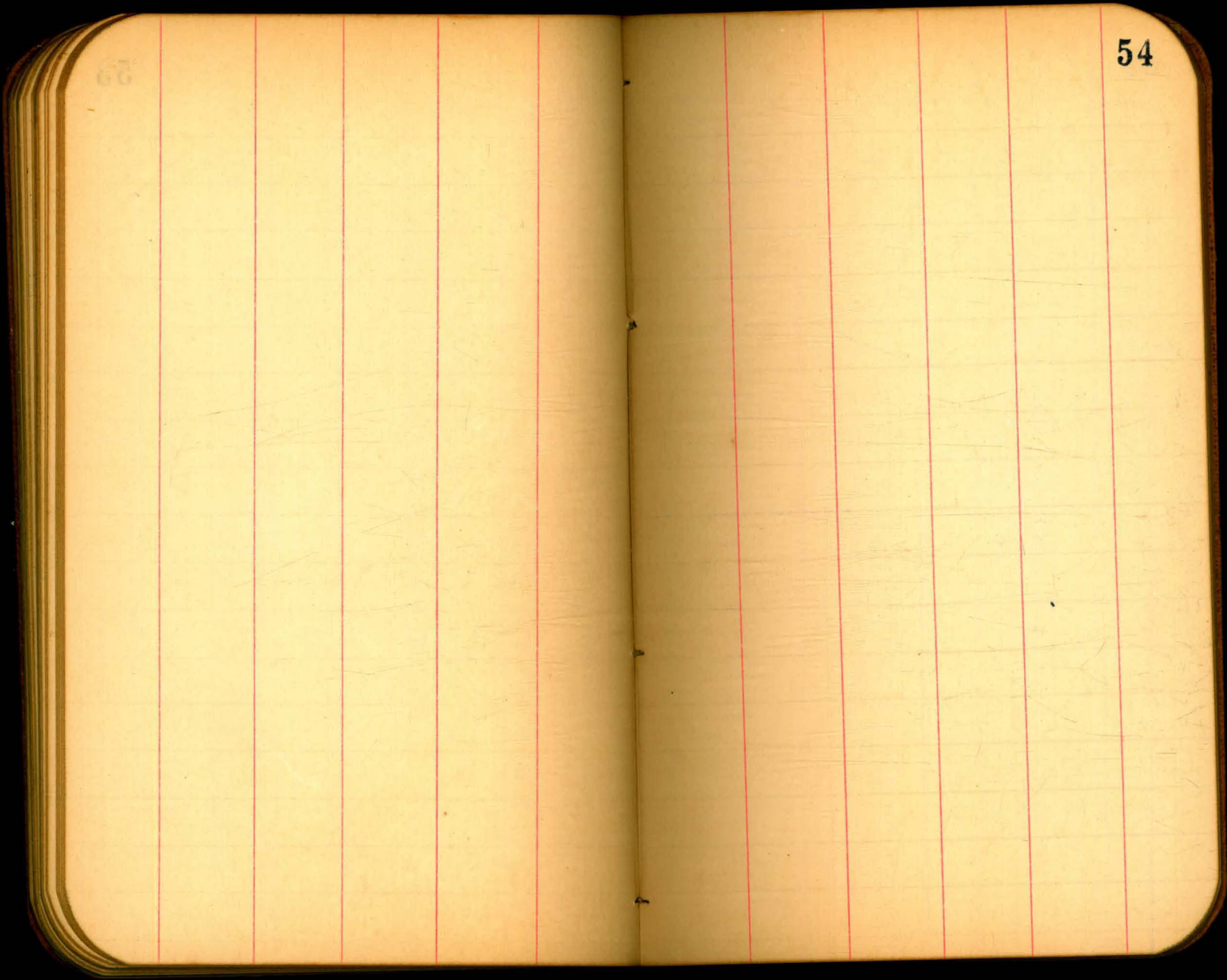
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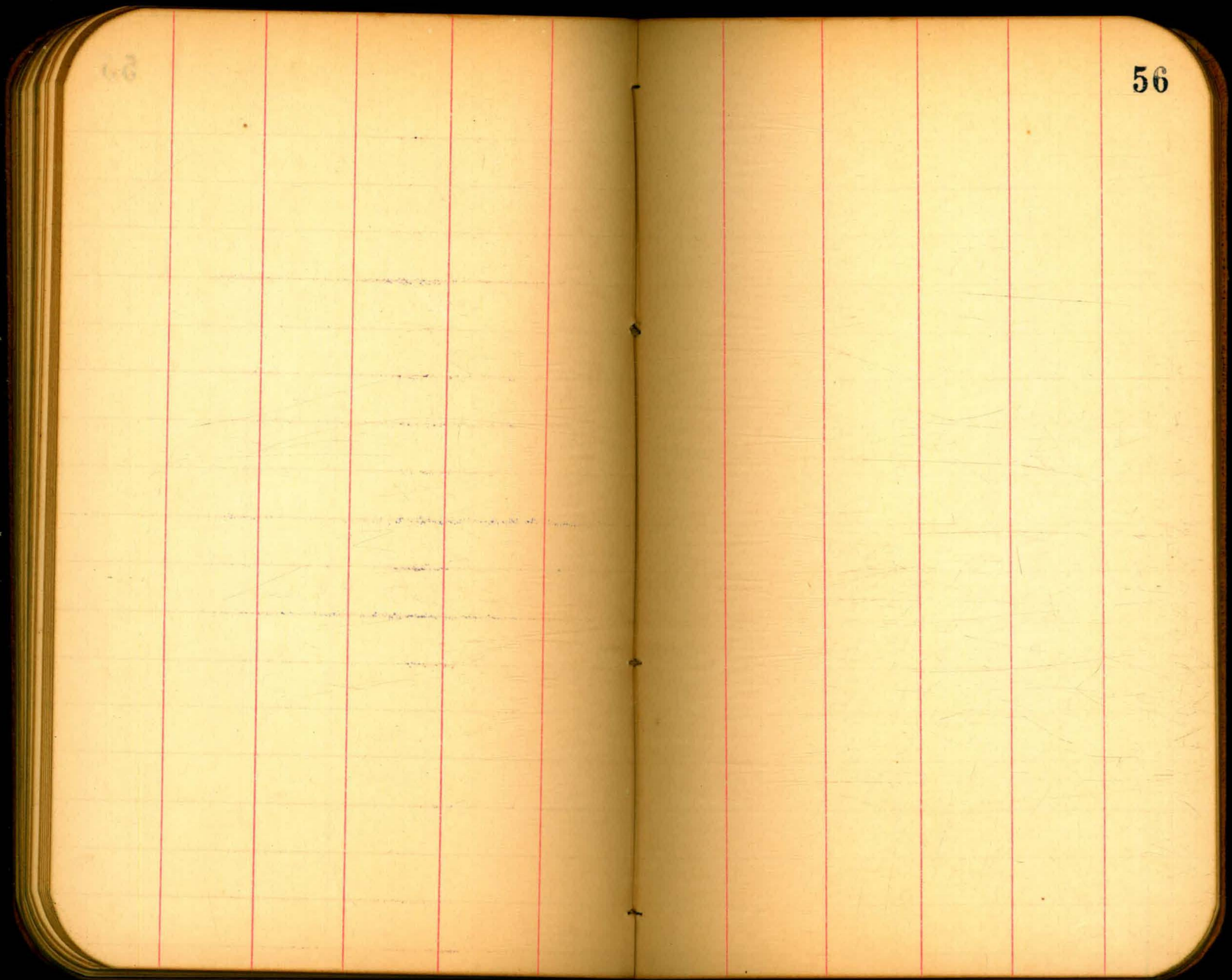


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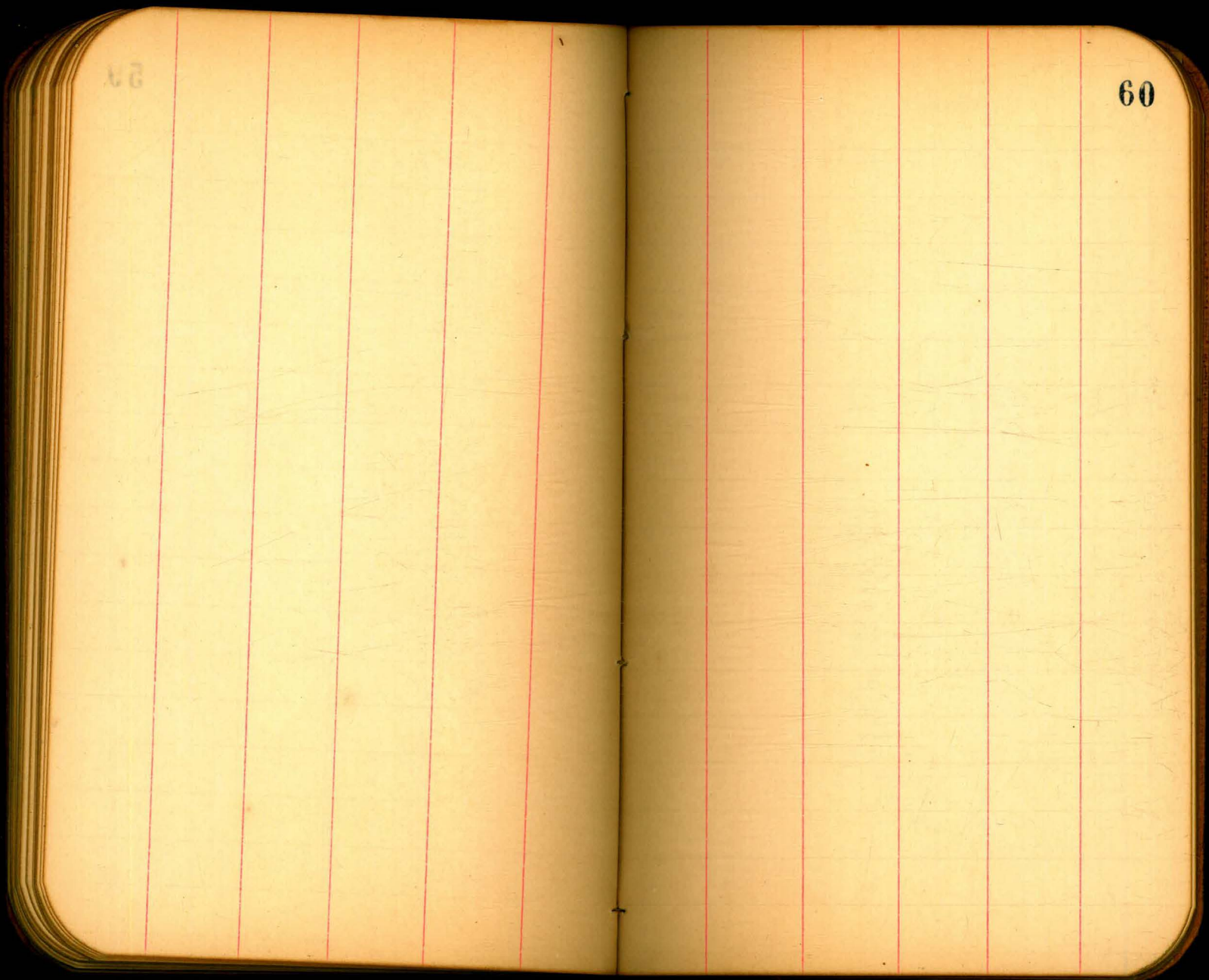
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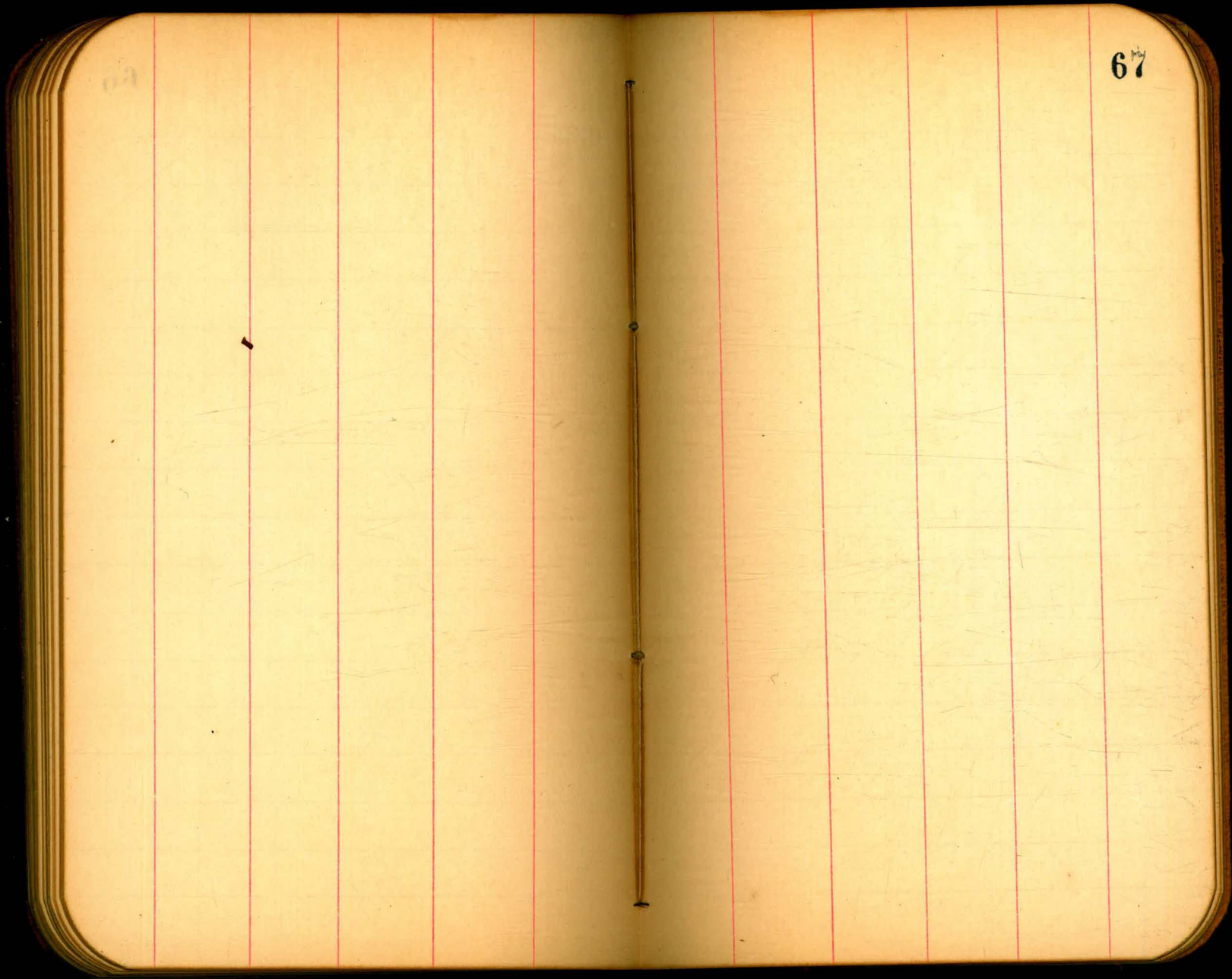
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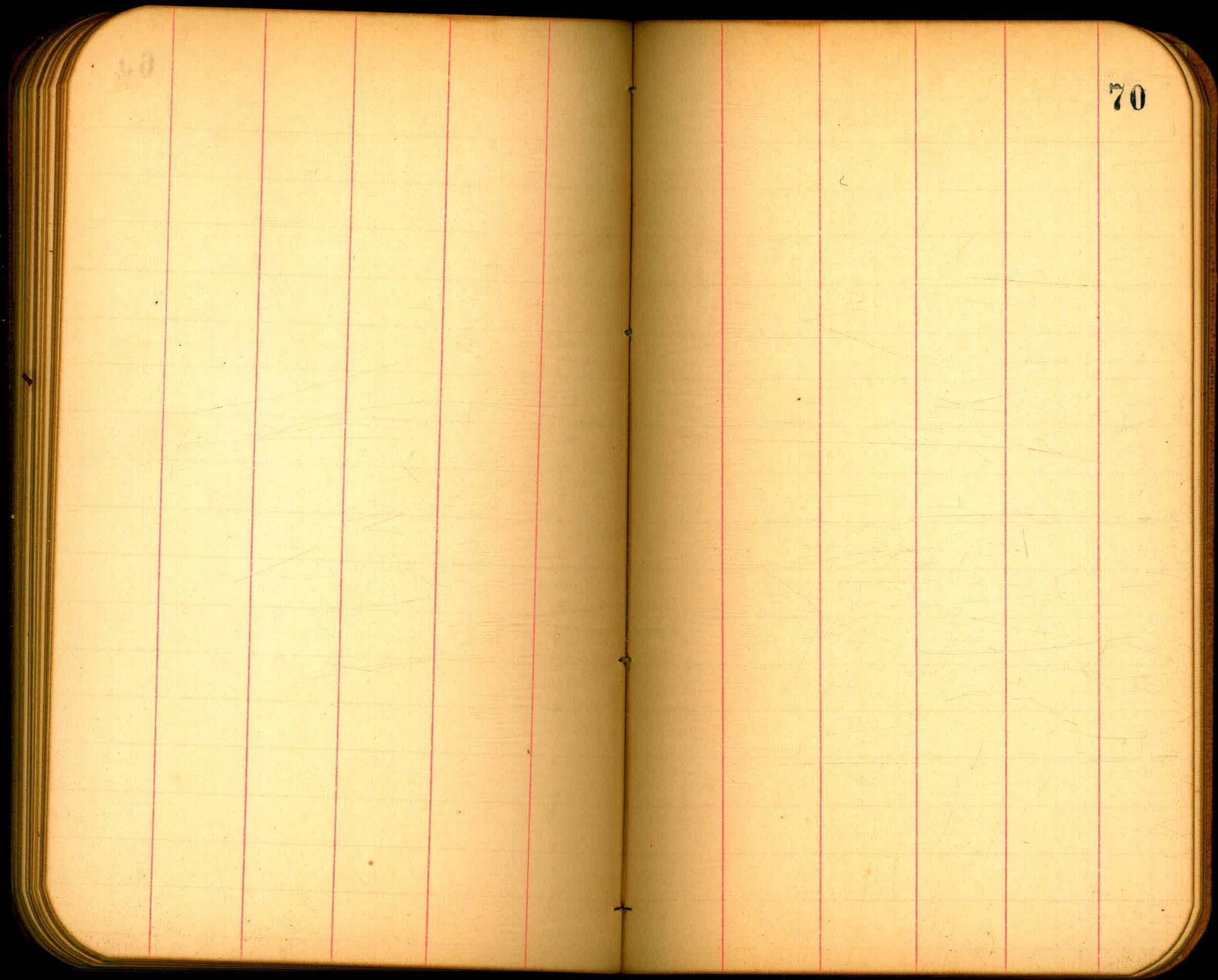
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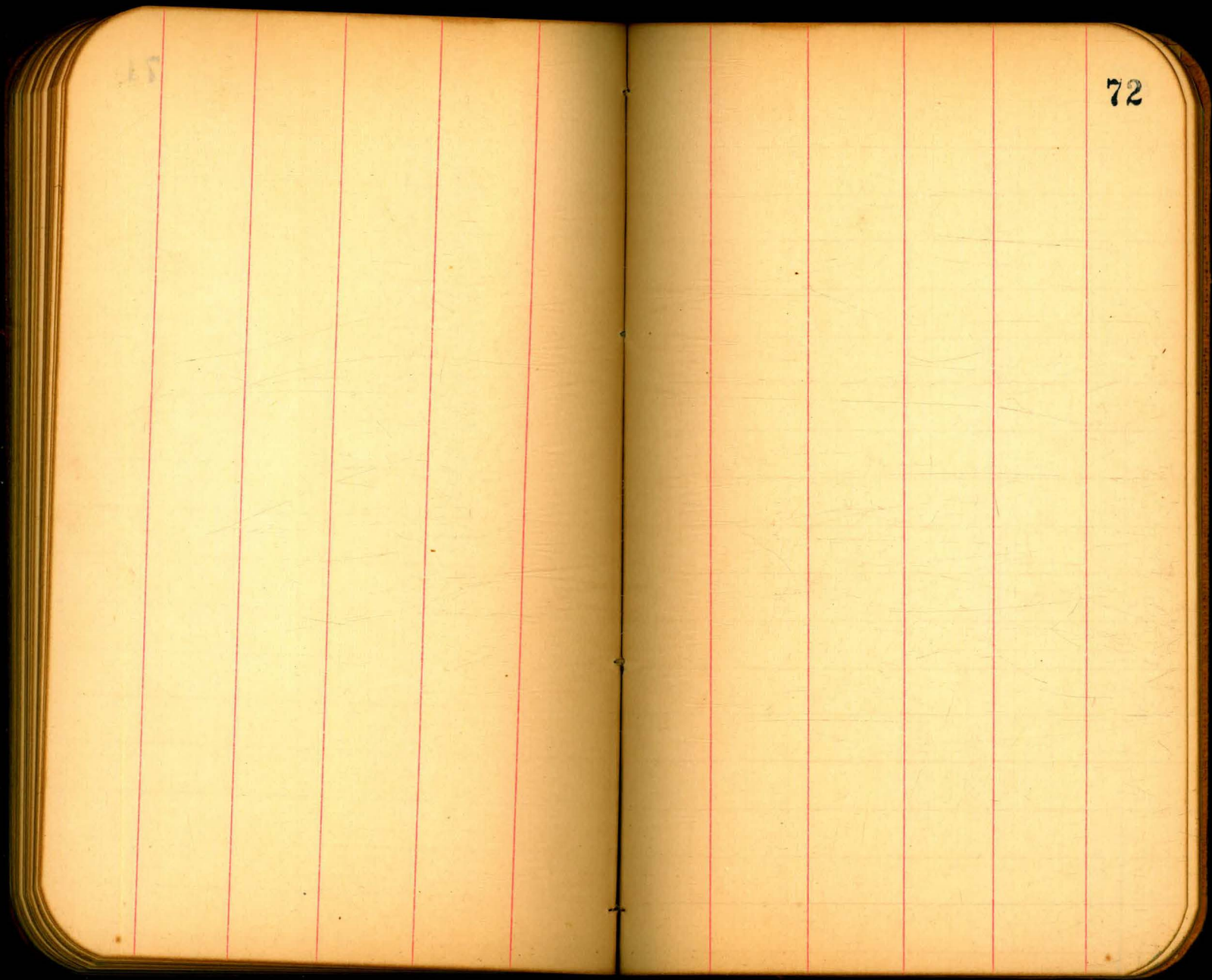
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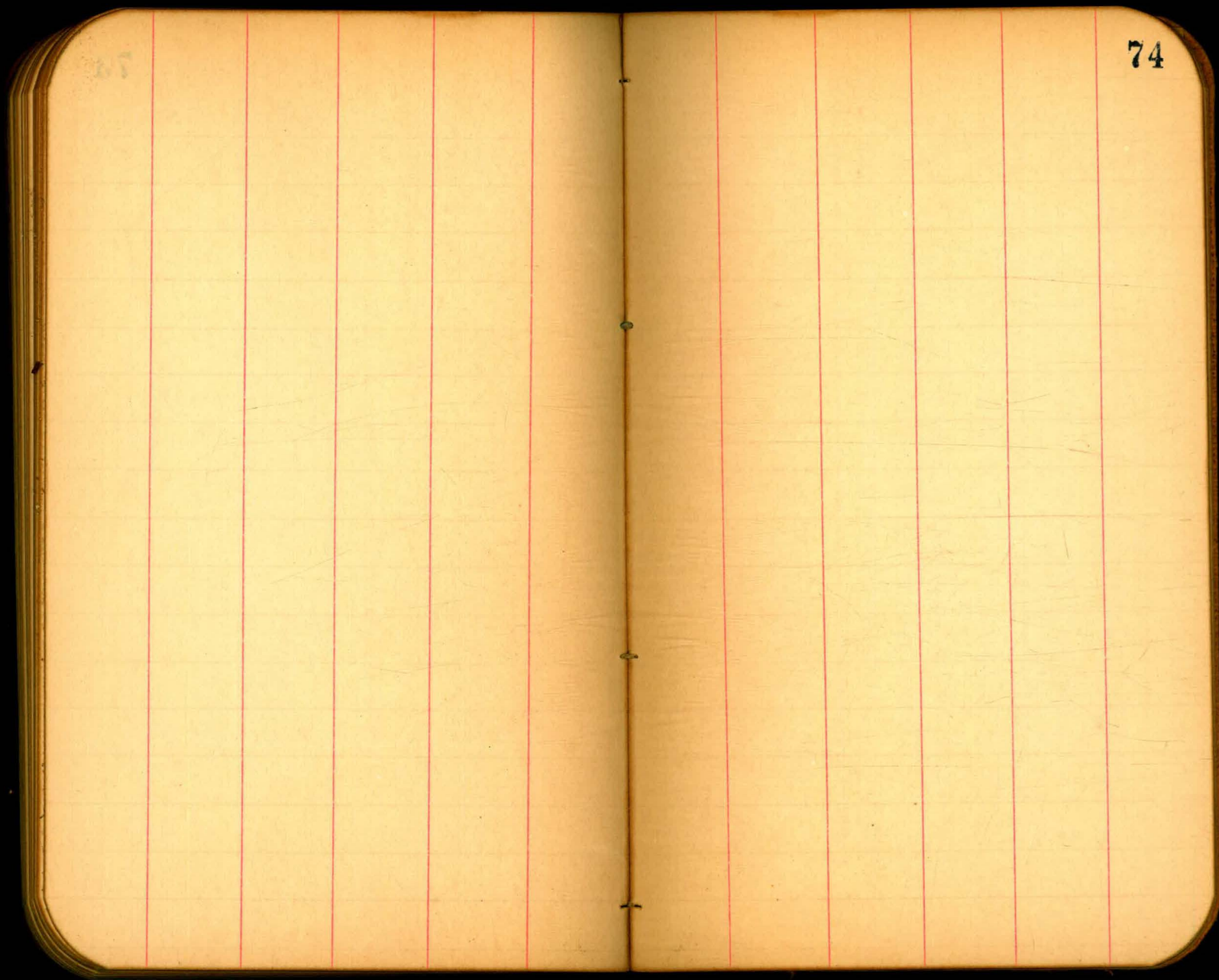
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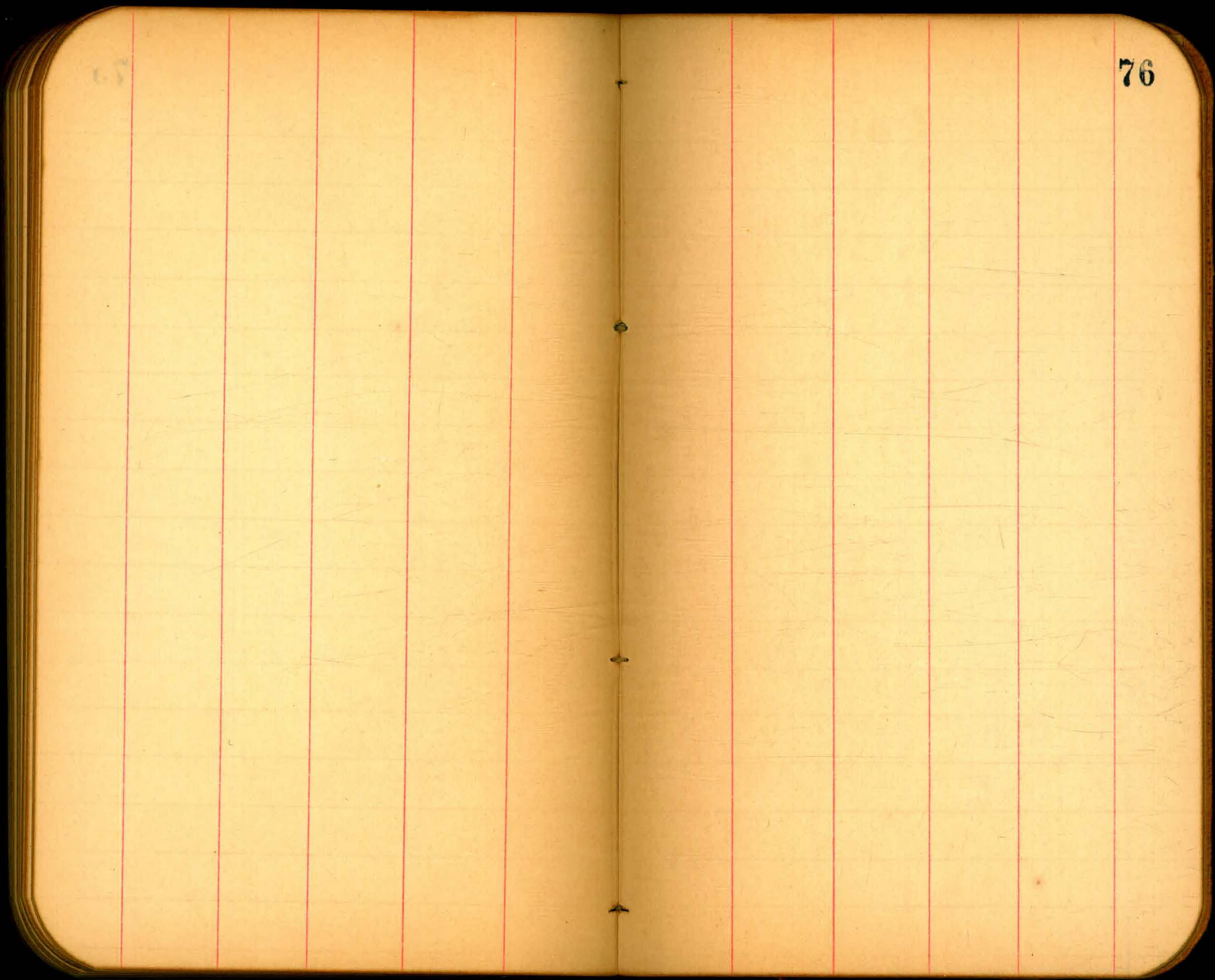
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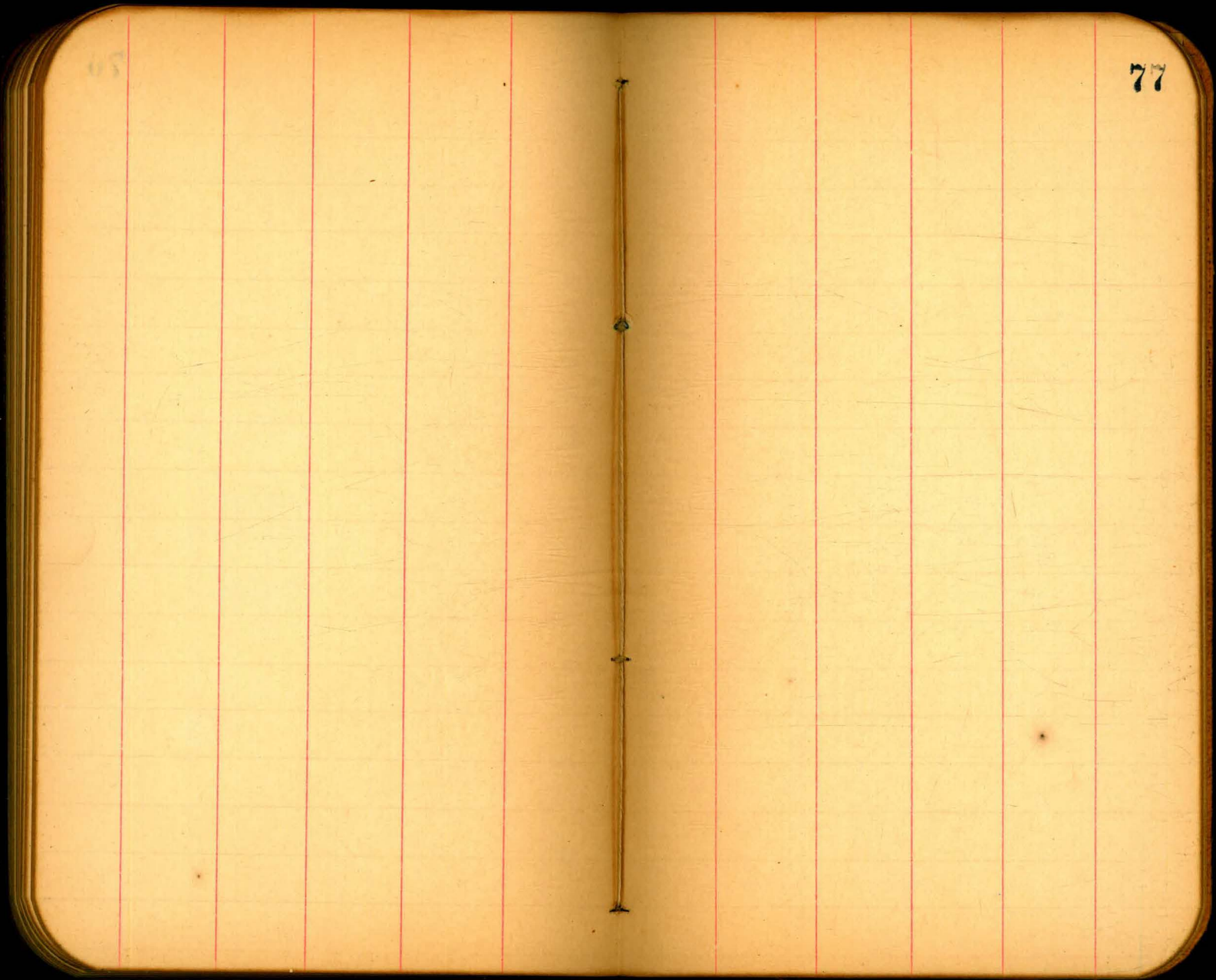
74

75



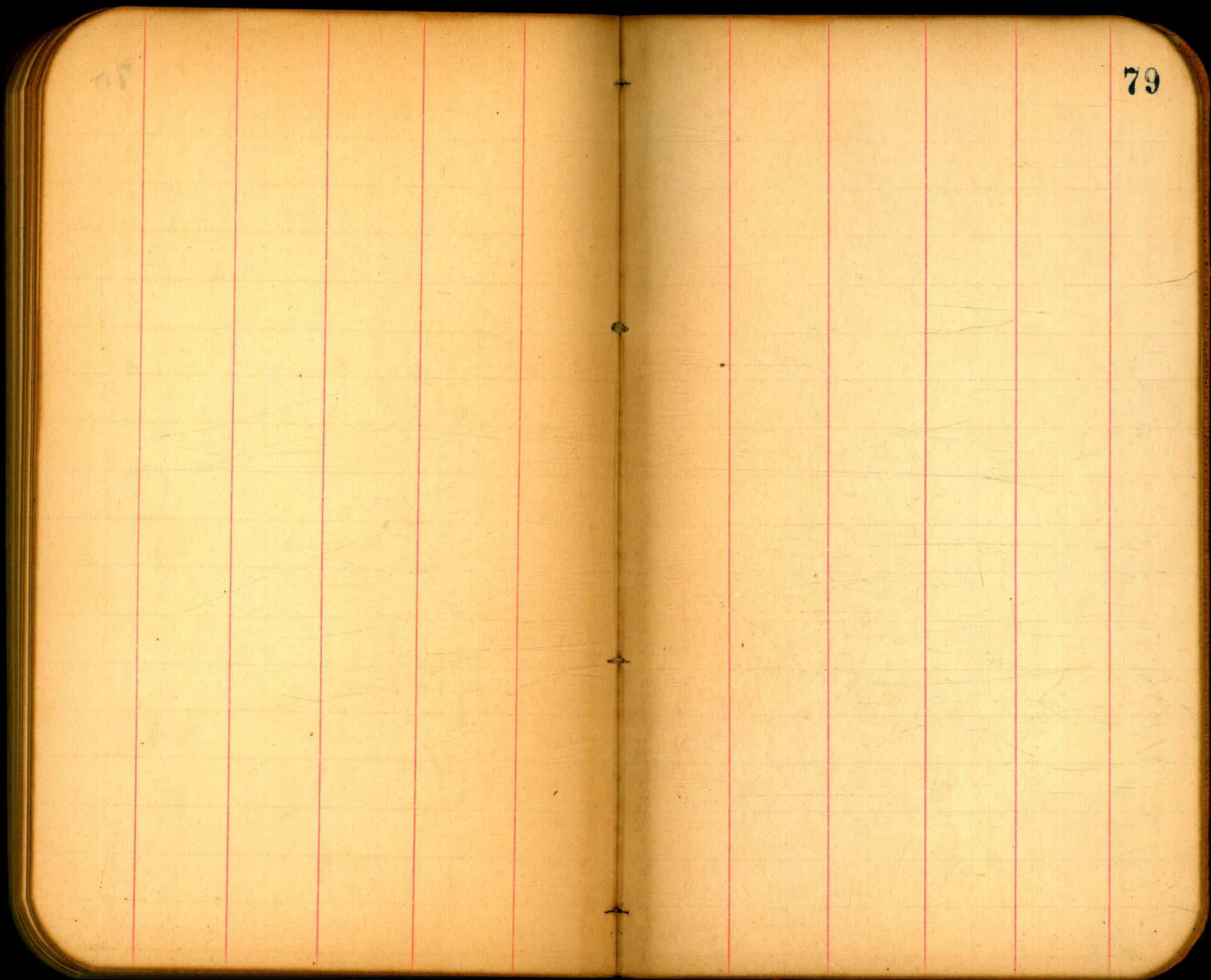
65

76



77

78



79

174.65	1374.254H.	156.22
0.11		3.96
174.76		160.18
12.17		6.80
162.59	TR	159.38
1.47		11.92
164.06		171.30
7.78		1.08
156.28 ✓	TR	170.22
		9.69
1374 - 156.22		179.91
		12.69
	T.P.	167.22
		2.14
		169.36
		12.89
	TR	156.47
		2.59
		159.06
		12.15
	TR	146.91
		1.48
		148.39
		12.49
	TR	135.90
		1.1
		136.01
		12.53
	TR	123.48
		1.82
		125.30
		3.96
	TR	121.34

~~12.47~~

121.22

36
9 121.58
3.09

118.49
8.22

126.71
2.48

124.23
12.90

137.13
77

136.36
12.34

148.70
75

147.95
13.01

160.94

157.20

3.72

121.22

1167

4.28

150 3.280
3280

150 3.200
3200

Handwritten calculations and notes on the left page of the notebook, including numbers like 154.25, 130.25, 192.0, and various arithmetic operations. A large red number '236' is written in the center.

*Return to City Engineers Office
City Hall, San Diego, Cal.*

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City Hall, San Diego, Cal.*
TRAVERSE TABLE FOR TRANSIT BOOK
From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0	99.98	1.75	100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.62	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
DEGREES.	¾ DEGREE.		½ DEGREE.		¼ DEGREE.		DEGREES.		