

SEWERAGE  
9<sup>TH</sup> ST LEVELS

9

TRANSIT

F. B. 674



674

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.
1	2½	21	49	41	95½
2	4¾	22	51½	42	98
3	7	23	53¾	43	100½
4	9½	24	56	44	102¾
5	11¾	25	58½	45	105
6	14	26	60¾	46	107½
7	16½	27	63	47	109¾
8	18¾	28	65½	48	112
9	21	29	67¾	49	114½
10	23½	30	70	50	116¾
11	25¾	31	72½	51	119
12	28	32	74¾	52	121½
13	30½	33	77	53	123¾
14	32¾	34	79½	54	126
15	35	35	81¾	55	128½
16	37½	36	84	56	130¾
17	39¾	37	86½	57	133
18	42	38	88¾	58	135½
19	44½	39	91	59	137¾
20	46¾	40	93½	60	140

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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.

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



H.L.L. }  
 I.L.M. } July 14/57

$\Delta$	+	HI	—	Elev.	BB
HM	3.24	8.61		5.37	5.37
$\Delta 3$			7.26	1.35	
3+40			6.83	1.78	
$\Delta 0$			6.41	2.20	
0+50			5.78	2.83	
$\Delta 1$			5.37	3.24	
1+50			4.45	4.16	
$\Delta 2$			4.50	4.11	
2+50			4.28	4.33	
$\Delta 3$			3.66	4.95	
3+40			3.07	5.54	
$\Delta 0$			2.76	5.85	
0+50			2.38	6.23	
$\Delta 1$			1.35	7.26	
T.P.	7.00	14.26			
1+50			6.10	8.16	
$\Delta 2$	5.18	14.95	5.19	9.07	
2+50			4.97	9.28	
$\Delta 3$			3.93	10.32	
3+40			3.06	11.19	
$\Delta 0$			2.50	11.75	

M 8 9 57.

N 8 9 57.

M 8 9 57.

II 8 9 57.



H.C.L. }  
 D.C.M. } July 14/87

2

$\Delta$	+	HI	-	Elev	B.B.
BM		14.25	2.46	11.79	11.78
T.P.	7.05	18.84			
0+50			6.06	12.78	
$\Delta 1$			5.62	13.22	
1+50			5.32	13.52	
$\Delta 2$			4.16	14.68	
2+50			3.15	15.67	
$\Delta 3$			2.26	16.58	
3+40			1.27	17.57	
$\Delta 0$			1.20	17.64	
0+50			0.83	18.01	
T.P.	6.88	24.89			
$\Delta 1$			6.13	18.76	
1+50			5.32	19.67	
$\Delta 2$			4.80	20.09	
2+60			4.08	20.81	
$\Delta 3$			3.26	21.63	
3+40			2.73	22.16	
$\Delta 0$			1.57	23.32	
BM			1.47	23.42	23.42
0+50			0.60	24.29	

K & J ST

J & J ST



H.L. }  
 D.C.M. } July 14/87

3

$\Delta$	+	H.I.	-	Elev	BB
T.P.	6.81	31.10		24.29	
$\Delta 1$			6.12	24.98	
1+50			5.27	25.83	
$\Delta 2$			4.81	26.29	
2+50			3.98	27.12	
$\Delta 3$			2.95	28.15	
3+40			2.90	28.20	
$\Delta 0$			2.33	28.77	
0+50			1.91	29.19	
T.P.	6.85	36.04			
$\Delta 1$			6.53	29.57	
1+50			5.95	30.09	
$\Delta 2$			5.08	30.96	
2+50			4.53	31.51	
$\Delta 3$			3.78	32.26	
3+50			2.23	33.81	
$\Delta 0$			2.40	33.64	
B.M.			2.86	33.18	33.17
0+50			0.24	35.80	
T.P.	9.10	44.90			
$\Delta 1$			7.45	37.45	

H & G ST.

H & G ST.



H.L. }  
 U.C.M. } July 14/57

$\Delta$	+	H.I.	-	Elev	BB
1+50		44.90	5.78	39.12	
$\Delta 2$			4.83	40.07	
2+50			3.91	40.99	
$\Delta 3$			2.71	42.19	
3+40			1.80	43.10	
$\Delta 0$			0.57	44.33	
I.P.	7.15	51.48			
0+50			6.17	44.31	
$\Delta 1$			4.98	46.50	
1+50			4.83	46.65	
$\Delta 2$			3.84	47.64	
2+50			2.81	48.67	
$\Delta 3$			2.23	49.25	
3+40					
$\Delta 0$			0.51	50.97	
I.P.	7.57	58.04			
BM			7.47	50.57	50.58
0+50			6.97	51.07	
$\Delta 1$			6.44	51.60	
1+50			5.67	52.37	
$\Delta 2$			4.14	53.90	

Ch & G ST.

I.P. & G ST.



H.L.L }  
 H.C.M } July 14/67

$\Delta$	+	HI	—	Flov	BB.
2+50		5804	3.00	55.04	
$\Delta 3$			1.75	56.29	
3+40			0.79	57.25	
$\Delta 0$			0.30	57.74	
T.F.	6.34	6408			
0+50			5.83	58.25	
$\Delta 1$			5.96	58.12	
1+50			5.71	58.37	
$\Delta 2$			4.69	59.39	
2+50			4.26	59.82	
$\Delta 3$			3.77	60.31	
3+40			2.58	61.50	
$\Delta 0$			3.35	60.73	
T.F.	6.93	6766			
B.M.			4.54	63.12	63.08
0+50			6.87	60.70	
$\Delta 1$			6.03	61.63	
1+50			5.48	62.18	
$\Delta 2$			4.94	62.72	
2+50			4.17	63.49	
$\Delta 3$			2.38	65.28	

III & 9 ST.

III & 9 ST.



HILL }  
 D.E.M. } July 14/87

6

Δ	+	H.I.	-	Elev	BB
3+40		67.66	1.57	66.09	
Δ 0			0.71	66.95	
I.F.	6.55	73.50			
0+50			6.19	67.31	
Δ 1			5.55	67.95	
1+50			4.96	68.54	
Δ 2			5.00	68.50	
2+50			5.74	67.76	
Δ 3			7.43	66.07	
3+40			8.67	64.83	
Δ 0			8.38	65.12	
BM.			8.08	65.42	65.40
I.F.	7.83	73.23			
0+50			8.26	64.97	
0+60			13.49	59.74	
Δ 1			7.96	65.27	
1+50			7.43	65.80	
2			6.87	66.36	
2+50			5.27	67.96	
Δ 3			0.70	72.53	
I.F.	11.45	83.98			

C & 9 ST.

B & 9 ST.

Dry creek





HCL }  
 ILM } July 15/64

7

$\Delta$	+	HI	-	Elev. BB
3+40		83.98	3.85	80.13
I.P.			0.10	83.88
I.P.	11.39	95.27		
$\Delta 0$			8.46	86.81
I.P.			0.37	94.90
I.P.	12.38	107.28		
0+50			11.55	95.73
$\Delta 1$			4.06	103.22
1+50			1.52	105.76
$\Delta 2$			1.57	105.71
2+50			1.40	105.88
$\Delta 3$			2.07	105.27
3+40			3.30	103.98
$\Delta 0$			0.42	106.86
I.P.	9.78	116.64		
0+50			6.98	109.66
$\Delta 1$			6.40	110.24
1-50			4.72	111.92
$\Delta 2$			4.35	112.29
2+50			8.58	108.06
$\Delta 3$			2.18	114.46

A & G ST.

ASH & G ST.



HCLL  
DEM S

8

$\Delta$	+	HI.	-	Elev	BB.
T.P.		116.64	0.01	116.63	
T.P.	11.89	128.52			
3+40			9.17	119.35	
$\Delta 0$			5.38	123.14	
T.P.			0.00	128.52	
T.P.	11.16	139.68			
0+50			10.64	129.04	
$\Delta 1$			7.95	131.73	
1+50			3.77	135.91	
T.P.			0.00	139.68	
T.P.	11.88	151.56			
$\Delta 2$			10.88	140.68	
2+50			5.78	145.78	
$\Delta 3$			2.02	149.54	
T.P.			0.19	151.37	
T.P.	5.97	157.34			
3+40			5.69	151.65	
B.M.			6.09	151.25	151.28
$\Delta 0$			4.50	152.84	
0+50			2.02	155.32	
$\Delta 1$			3.40	153.94	

Beech & GET

Cedar & GET



1+50	157.34	7.49	149.85
△ 2		8.50	148.84
2+50		7.20	150.14
△ 3		1.81	155.53
T.E.	8.77	164.30	
3+40		3.43	160.87

T.E. N.I.



The image shows an open notebook with two pages. The left page is a ledger page with a grid of red lines. It has two horizontal lines near the top, creating a header section. Below these, there are five vertical lines that divide the page into six columns of varying widths. The right page is a standard grid page with a uniform grid of light blue lines. The notebook is bound in the center, and the pages are a light cream color. The number '10' is printed in the top right corner of the right page.



10.m. 9<sup>th</sup> St N of S Nov 27/87

Sta + Hi. - Elev

Bm.	3.47	66.56	63.08
31			5.23 61.32
+20			5.29 61.26
+40			5.71 60.84
+60			5.53 61.02
+85			5.25 61.30
32+10			4.84 61.71
+35			4.40 62.15
+60			4.29 62.32
+85			3.80 62.75
33+10			3.52 63.03
+35			3.14 63.37
+60			2.81 63.74
+85			2.29 64.26
34+10			2.03 64.52
+35			1.66 64.89
+60			1.01 65.54
+80			0.72 65.83
35			0.37 66.18
+20			0.07 66.48

94 S NW. of Lake top June

S 81

N 25 81

S. Line C. St.

C. St.



Sta	+	Ht.	-	Elev
		66.55		
I.P.	3.976	69.23	1295	65.266
33+40			2.69	66.54
B.M.			2.57	66.66
B.M.			5.60	68.63
B.M.	4.40	71.06		66.66
35+65			4.23	66.83
+90			3.98	67.08
36+15			3.85	67.21
+40			3.74	67.32
+65			3.75	67.31
+90			3.71	67.35
37+15			3.40	67.66
+40			3.46	67.60
+65			3.86	67.70
+90			3.60	67.56
38+15			3.53	67.53
+40			3.42	67.64
B.M.			0.22	70.84

N. Line to Sta:

9<sup>th</sup> & C SW. Marked Pole

8<sup>th</sup> & C SW. Same Pin 7

9<sup>th</sup> & C SW. SAK to Pole

9 + B cap to left hand



S.P.M.

9<sup>A</sup> ST No. 2 Sea 187

Sta	+	H <sub>1</sub>	-	Elev
P.M.	4.71	75.55		71.84
38+40			7.91	67.64
+60			7.85	67.70
+80			7.67	67.88
39			7.44	68.11
+20			7.30	68.25
+45			6.67	68.88
+70			6.26	69.29
+95			6.87	69.68
40+20			6.86	70.69
+45			4.43	71.12
+70			3.74	71.41
+95			3.06	72.49
41+20			1.98	73.57
I.P.	10.96	85.55	0.96	74.59
+45			9.45	76.10
+70			6.84	78.67
+95			4.37	81.18
42+20			2.32	83.28
P.M.			1.49	84.06

9<sup>A</sup> B Cal low top Pass

S.P. ST

P. ST

N.P. ST

S.J.A

9<sup>A</sup> NE ST Pass



L.M.

Leonard 9th ST NW D Dec 2/97

Sta + Ht. - Elev

P.M. 11.23 95.29 84.06

H2+40 10.73 84.56

+60 9.22 86.07

+80 8.35 86.94

H3 7.24 88.05

+25 5.27 90.02

+50 3.39 91.90

+75 1.22 94.07

I.P. 11.59 106.44 0.44 94.85

H4 9.99 96.45

+25 7.66 98.78

+50 5.69 100.75

+75 4.96 101.48

H5 3.90 102.54

+25 2.75 103.69

+50 2.38 104.06

+75 1.80 104.64

H6 1.21 105.23

+20 0.60 105.84

I.P. 8.52 114.87 0.09 106.35

9th + A M.E. Apik cr

A ST

N2A ST

S2 A2 ST



L.P.M.

22. 9<sup>th</sup> St - N of Sec 2/87

Sta	+	H.I.	-	Elev
L		114.87		
46+40			8.48	106.39
+60			8.32	106.55
+80			8.54	106.33
B.M.	2.29	115.68	1.44	113.39
47+05			8.77	106.91
+30			8.05	107.63
+55			7.44	108.24
+80			7.07	108.61
48+05			6.60	109.48
+30			5.85	109.83
+55			4.88	110.60
+80			3.67	112.01
49+05			2.46	113.23
+30			1.07	114.61
I.P.	11.06	125.91	0.83	114.85
+55			9.53	116.34
+80			8.04	117.87
50			6.97	118.94
+20			6.01	119.90
1				

N 2<sup>nd</sup> St 819<sup>th</sup> St - N of Sec 2/873<sup>rd</sup> St 81

Buch St



Mendenhall

Linnard 9<sup>th</sup> St. Hill St. Dec 7/187

Sto	+	H.I.	-	Elev
51+41		125.91	5.55	120.36
+60			4.59	121.32
R.M.	8.96	132.62	2.25	123.66
+85			8.95	123.67
51+10			6.74	125.88
+35			4.68	127.94
+60			2.25	130.37
+85			0.05	132.57
I.P.	11.12	143.54	0.20	132.42
52+10			8.75	134.79
+35			6.38	137.16
+60			4.24	139.36
+85			1.67	141.87
T.P.	10.86	153.78	0.62	142.92
53+10			9.46	144.33
+35			7.16	146.62
+60			4.90	148.88
R.M.			2.96	150.82

9<sup>th</sup> + Beach NE Spire in Post9<sup>th</sup> + Cedar Sp. in Post SE



9<sup>th</sup> St - Nov 24 1897

Sta	+	Hi.	-	Elev.
Bm	6.30	157.12		150.82
53+60			8.23	144.89
+80			7.31	149.81
54			6.70	150.42
+20			6.26	150.86
+40			6.11	151.01
+65			6.84	157.28
+90			6.56	151.56
55+15			6.35	151.77
+40			6.00	152.12
+65			4.38	152.54
+90			4.81	152.81
56+15			3.84	153.28
+40			3.88	158.24
+65			3.64	153.48
+90			3.40	153.72
57+15			3.11	154.01
+40				

9 & Cedar S.W. SHK Post-  
S L Cedar

Cedar St

11<sup>th</sup> Cedar St



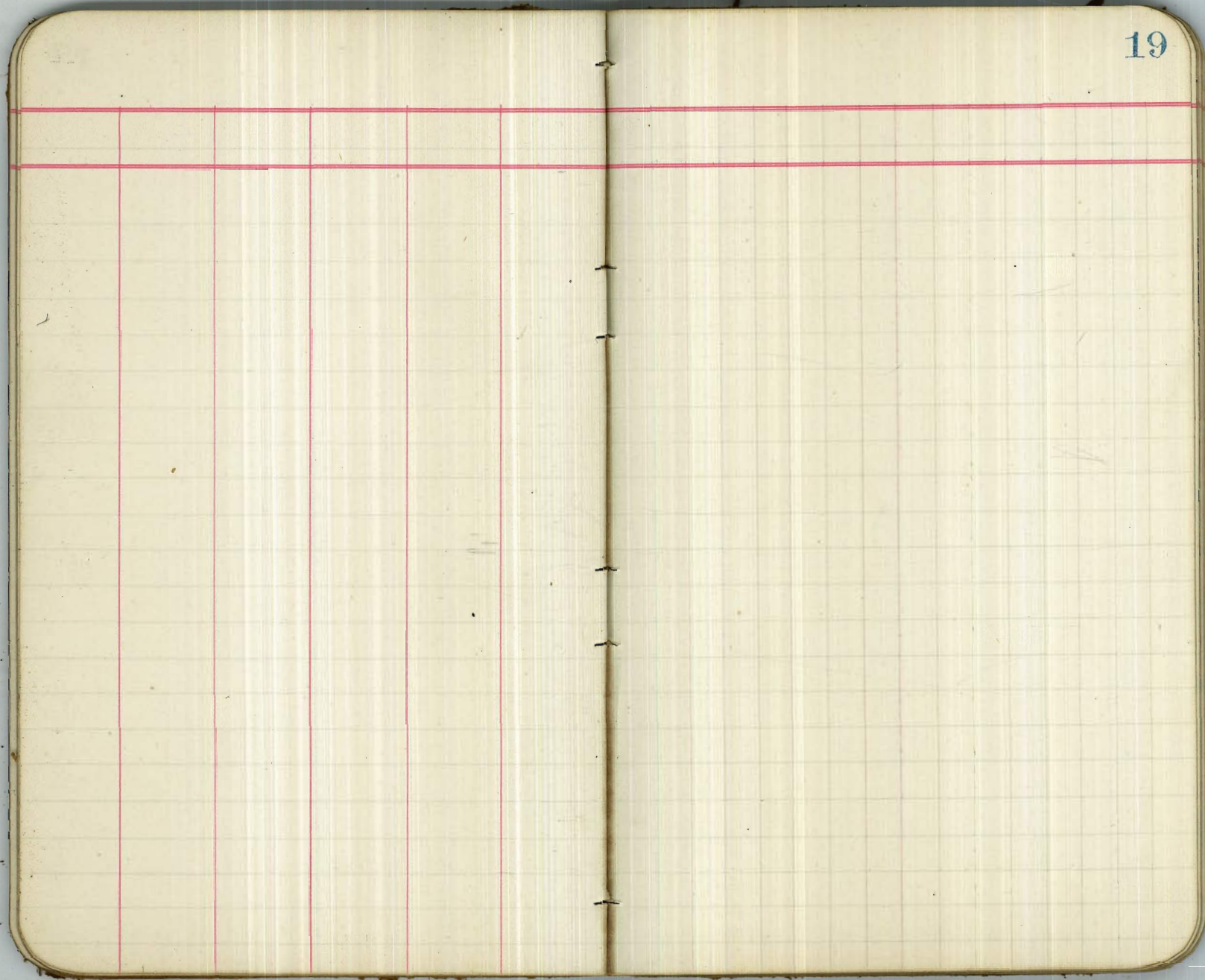
9.27 93.37

84.70

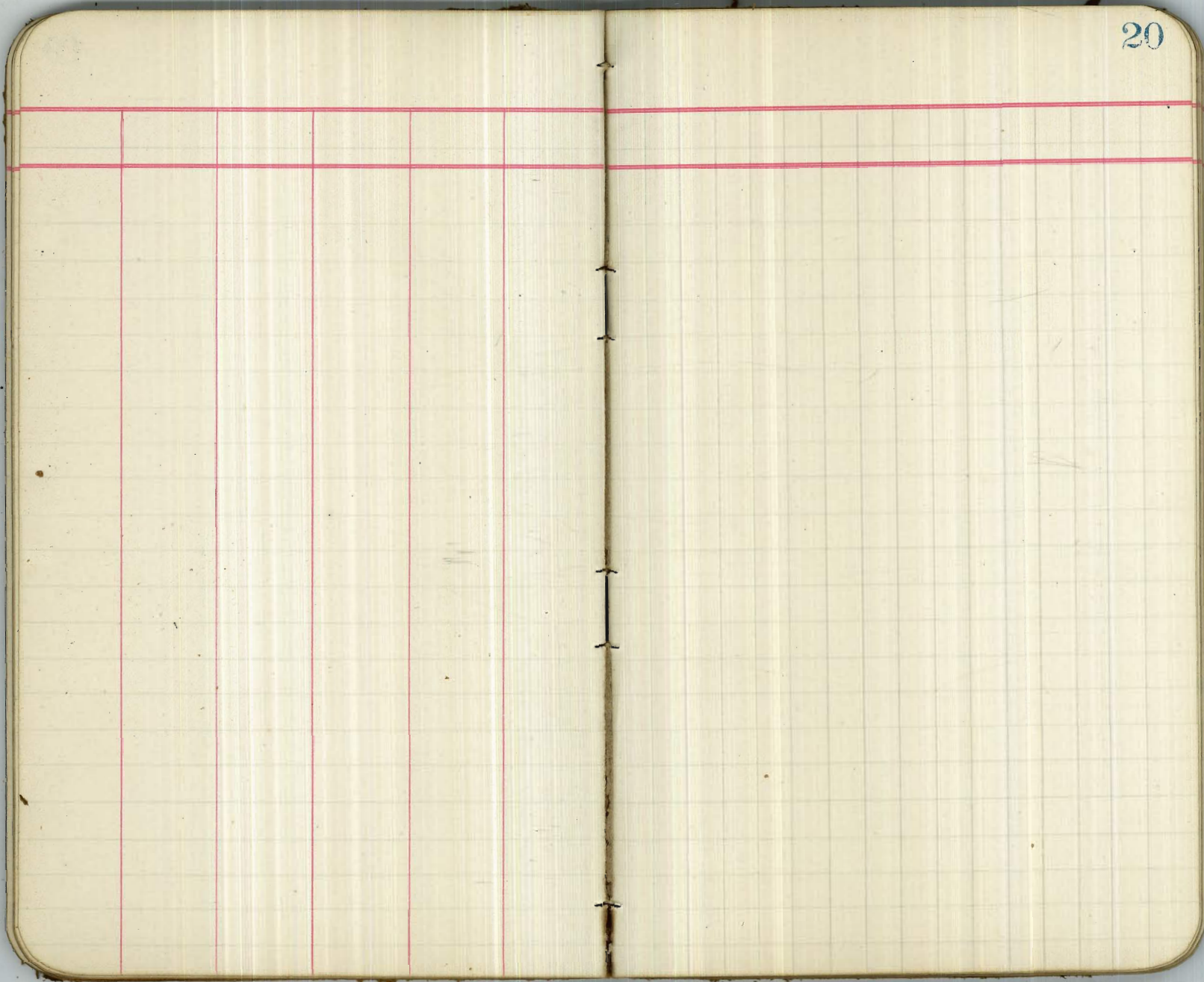
6.58 96.79

5.75 89.02

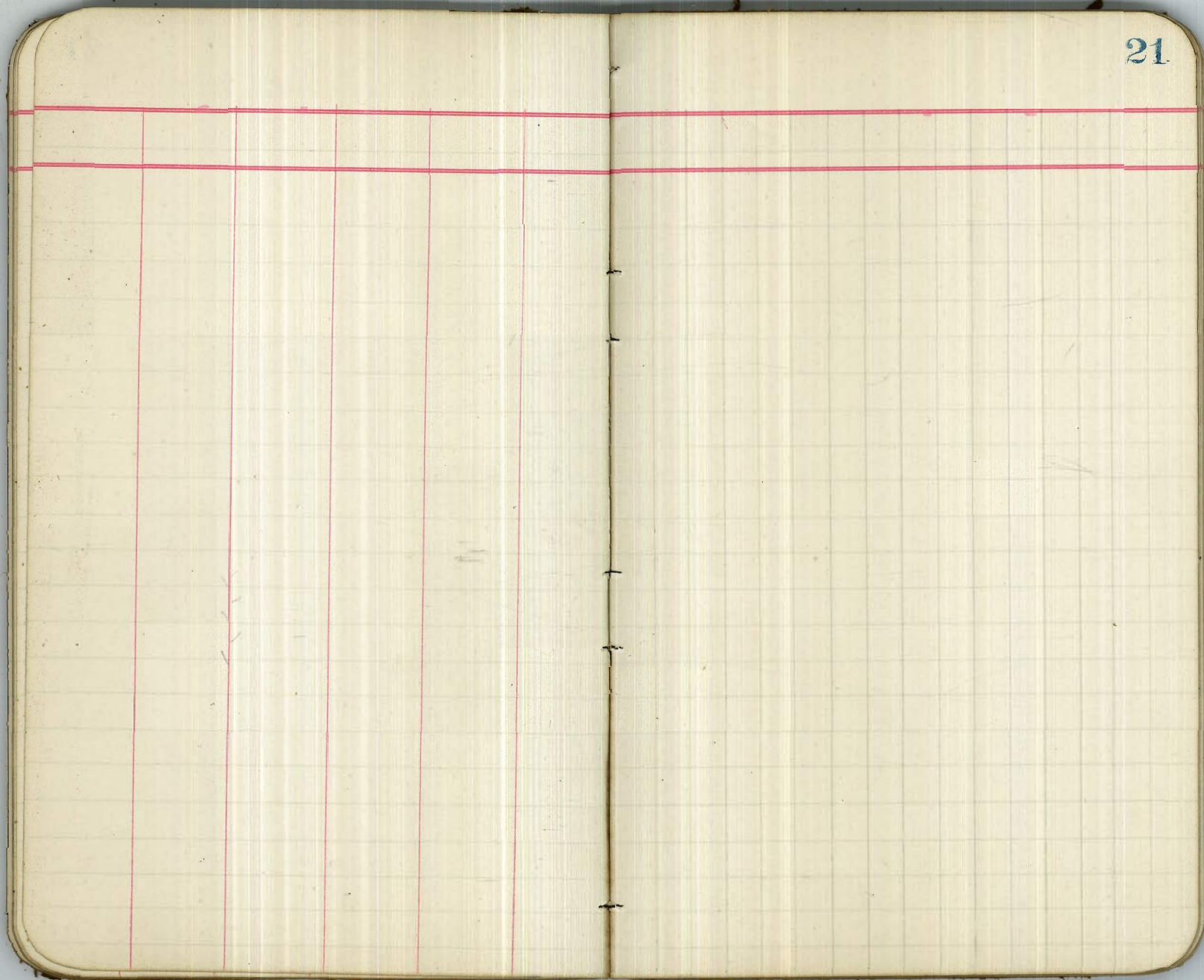




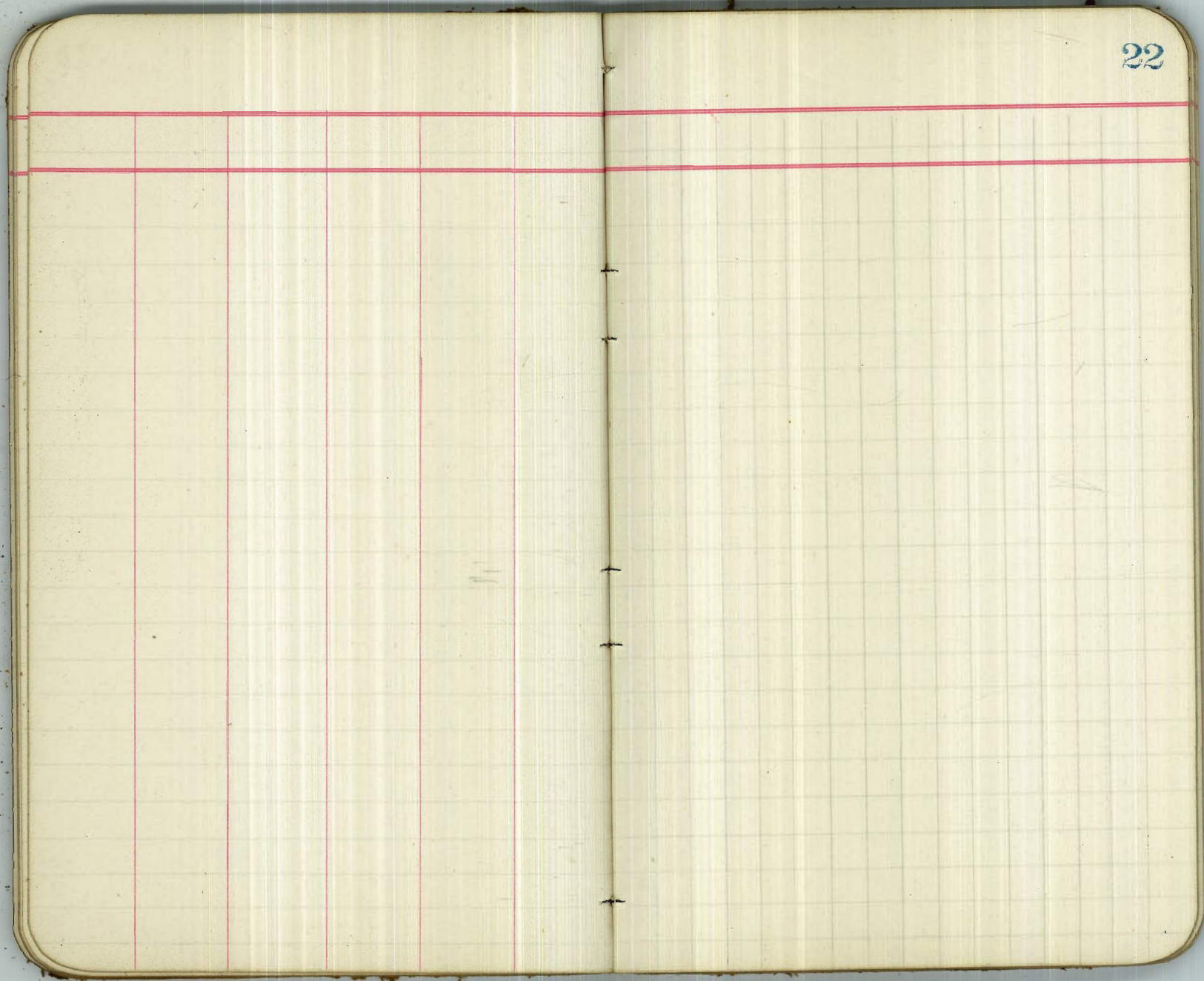




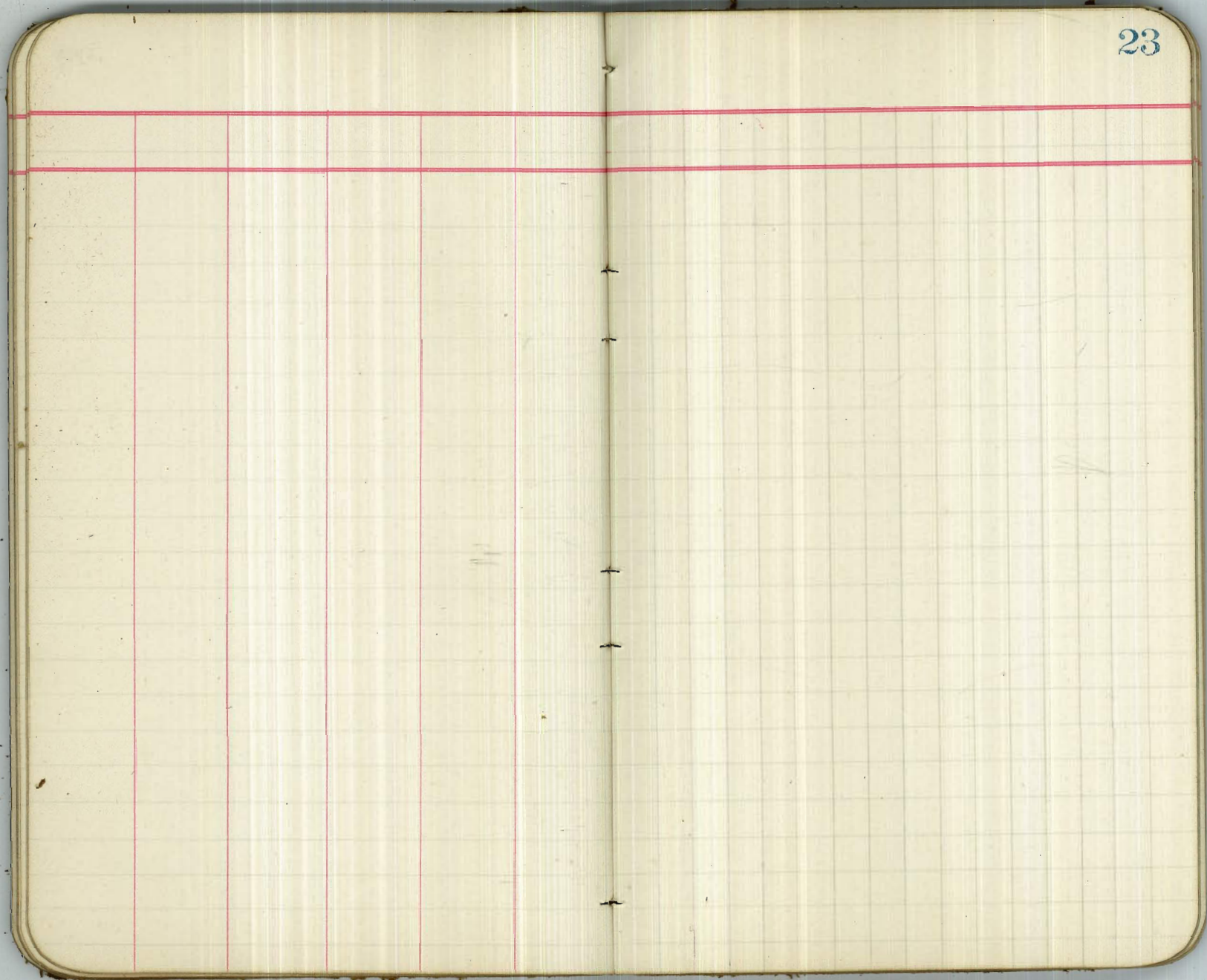




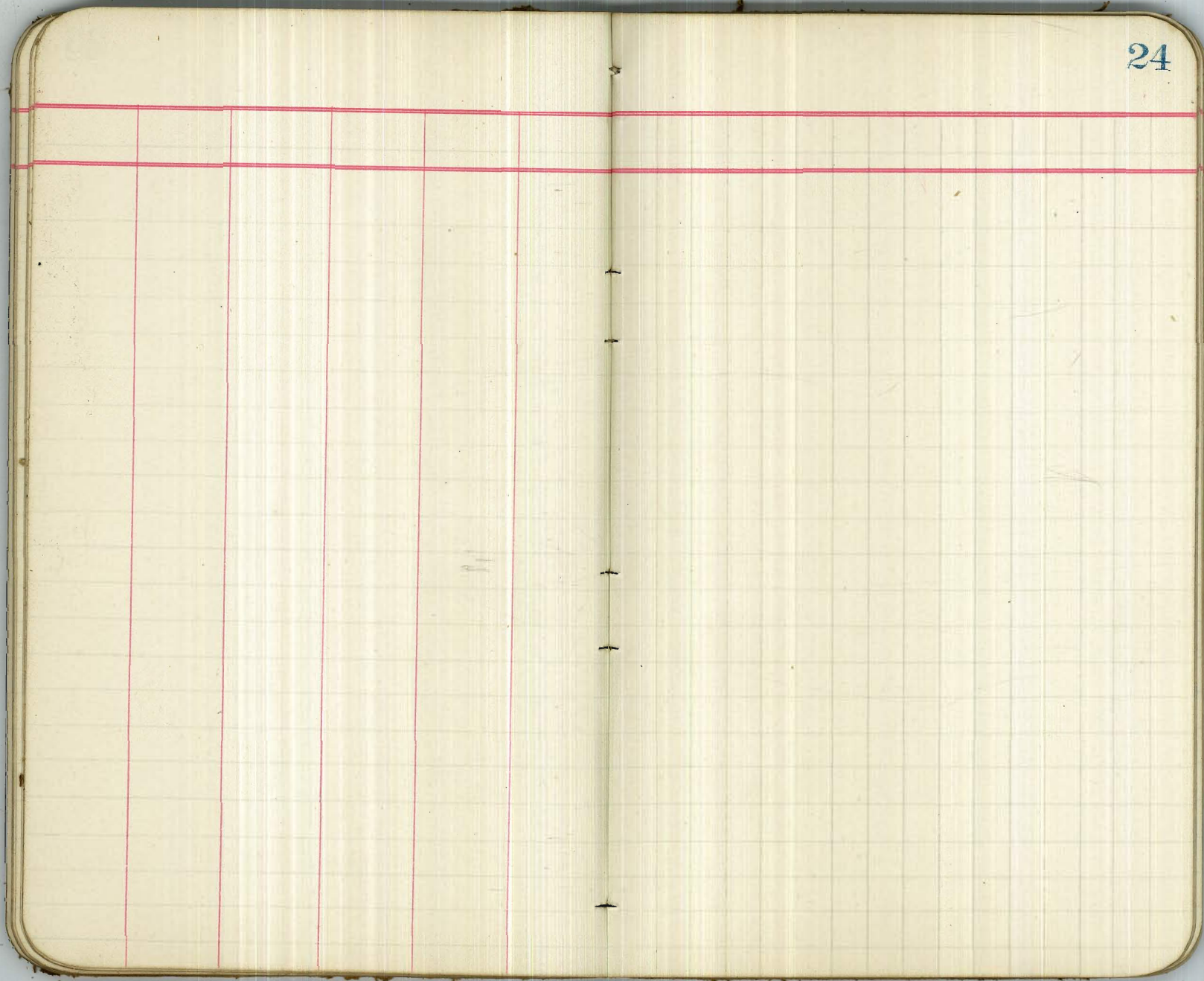




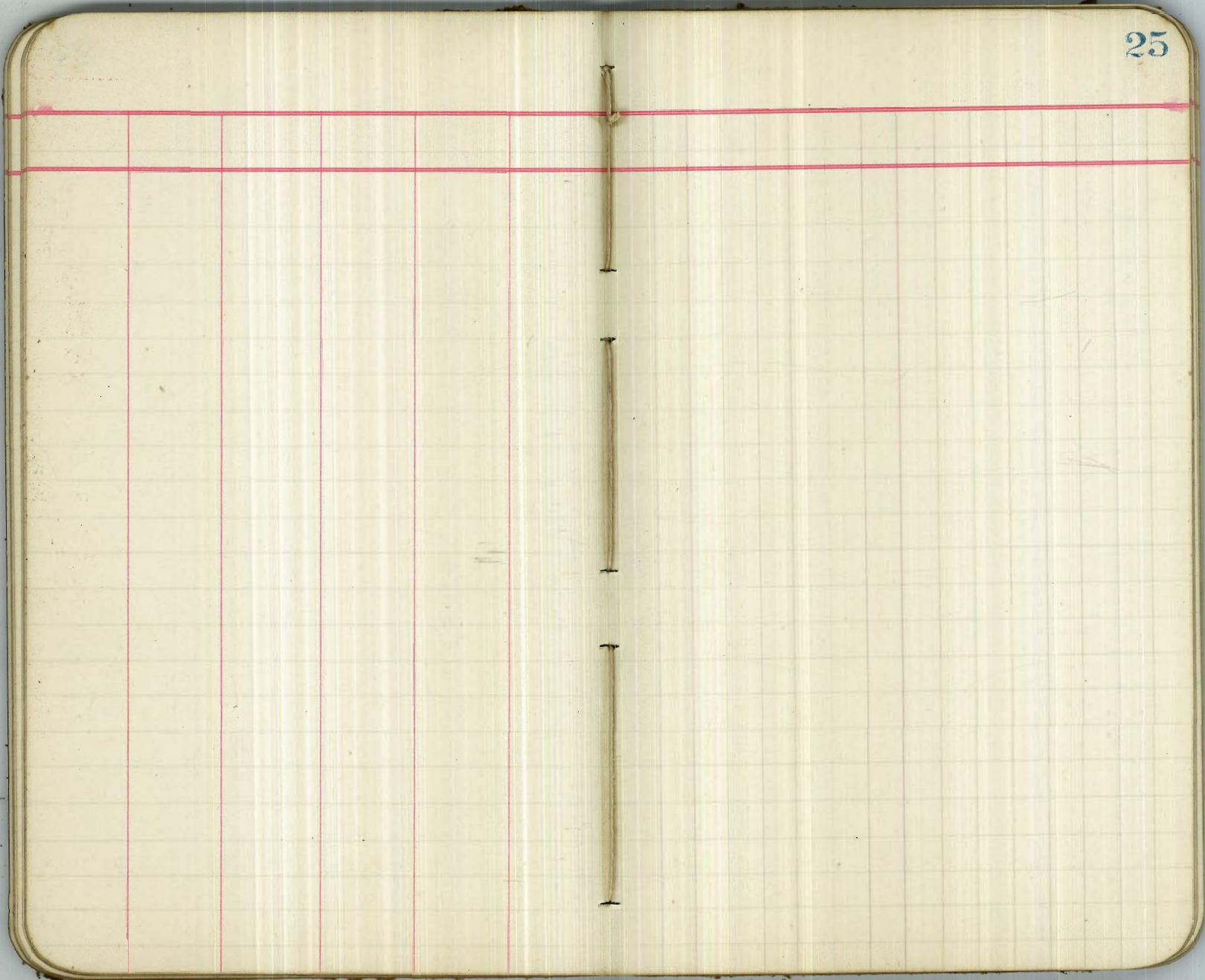




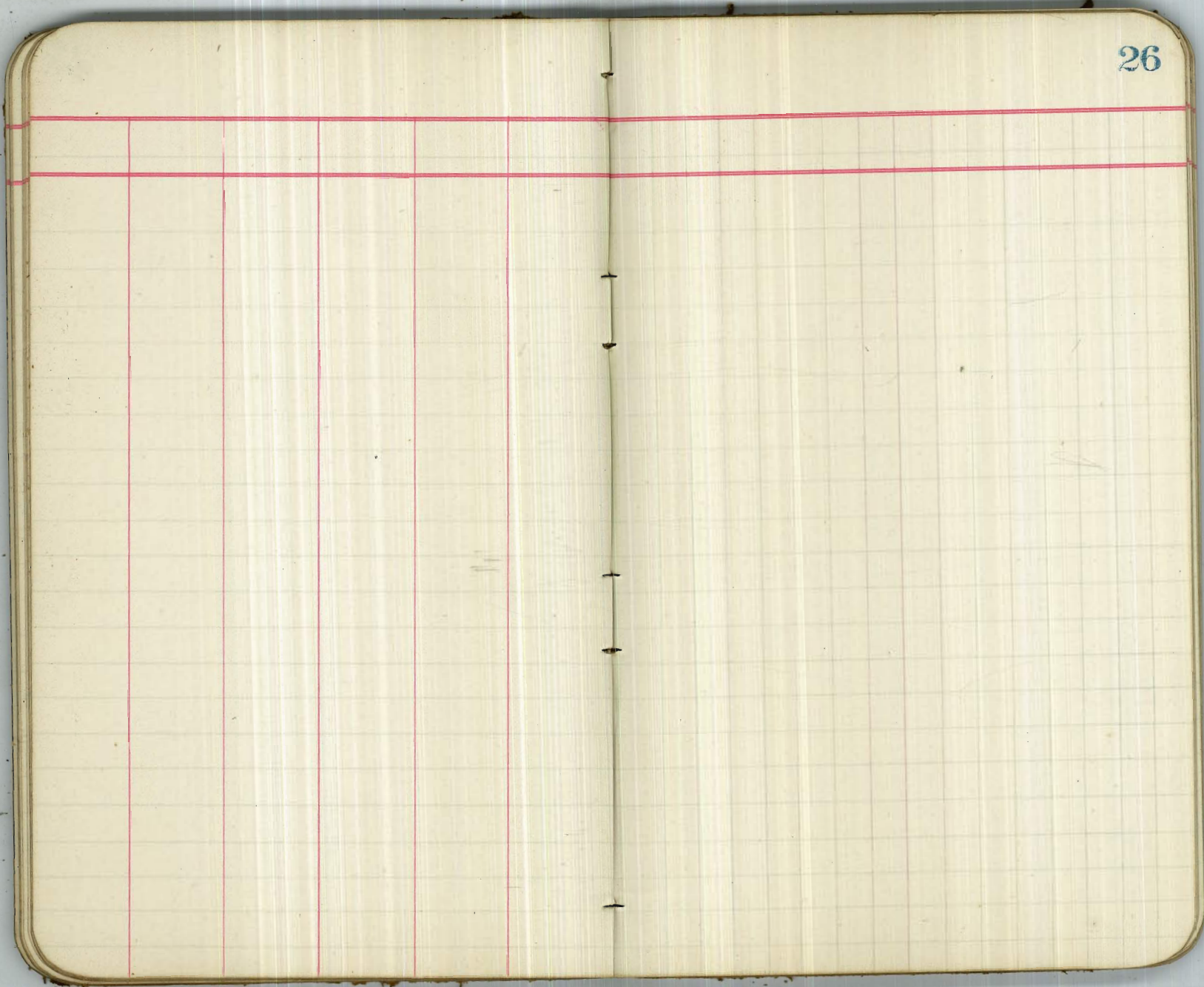






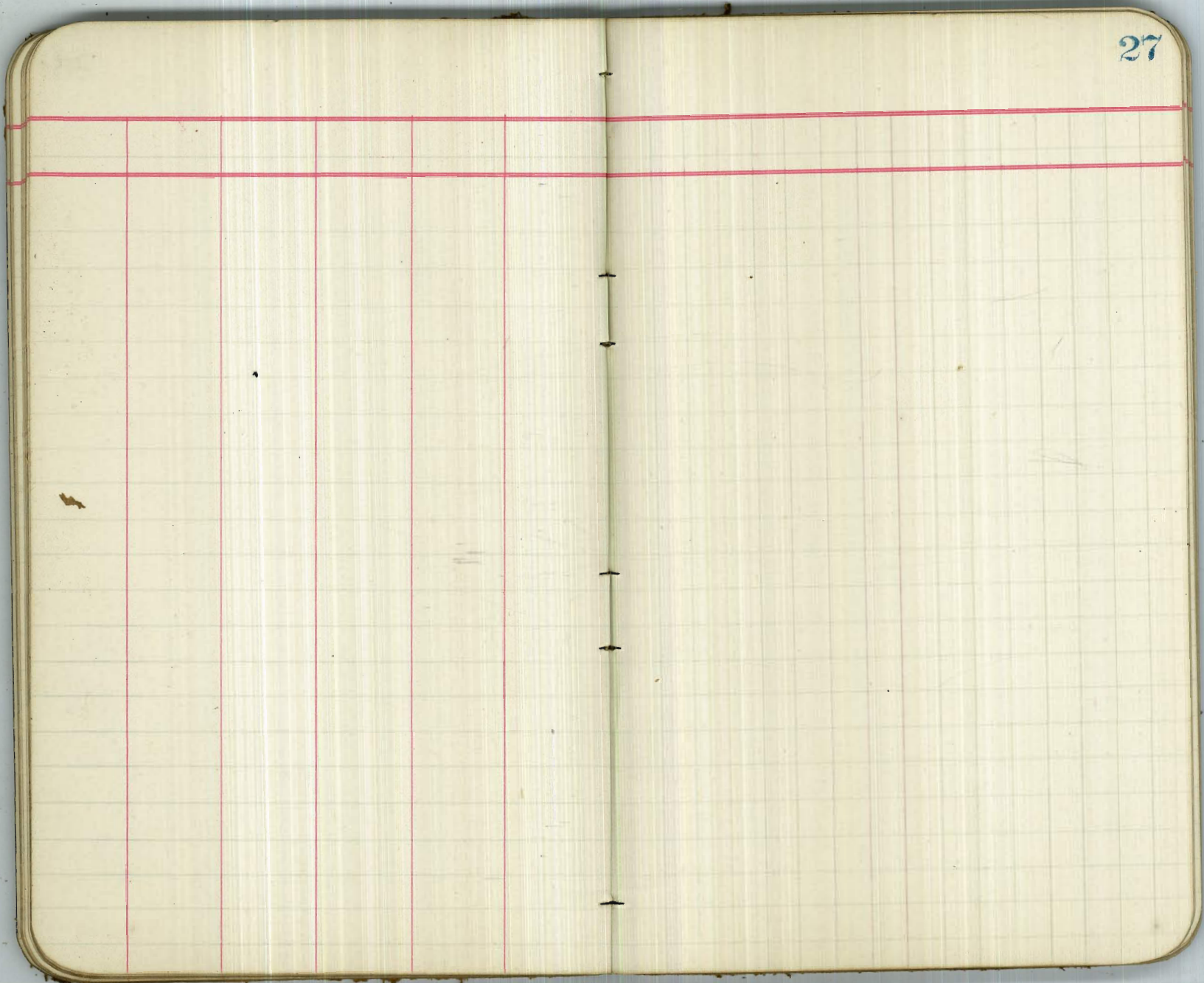








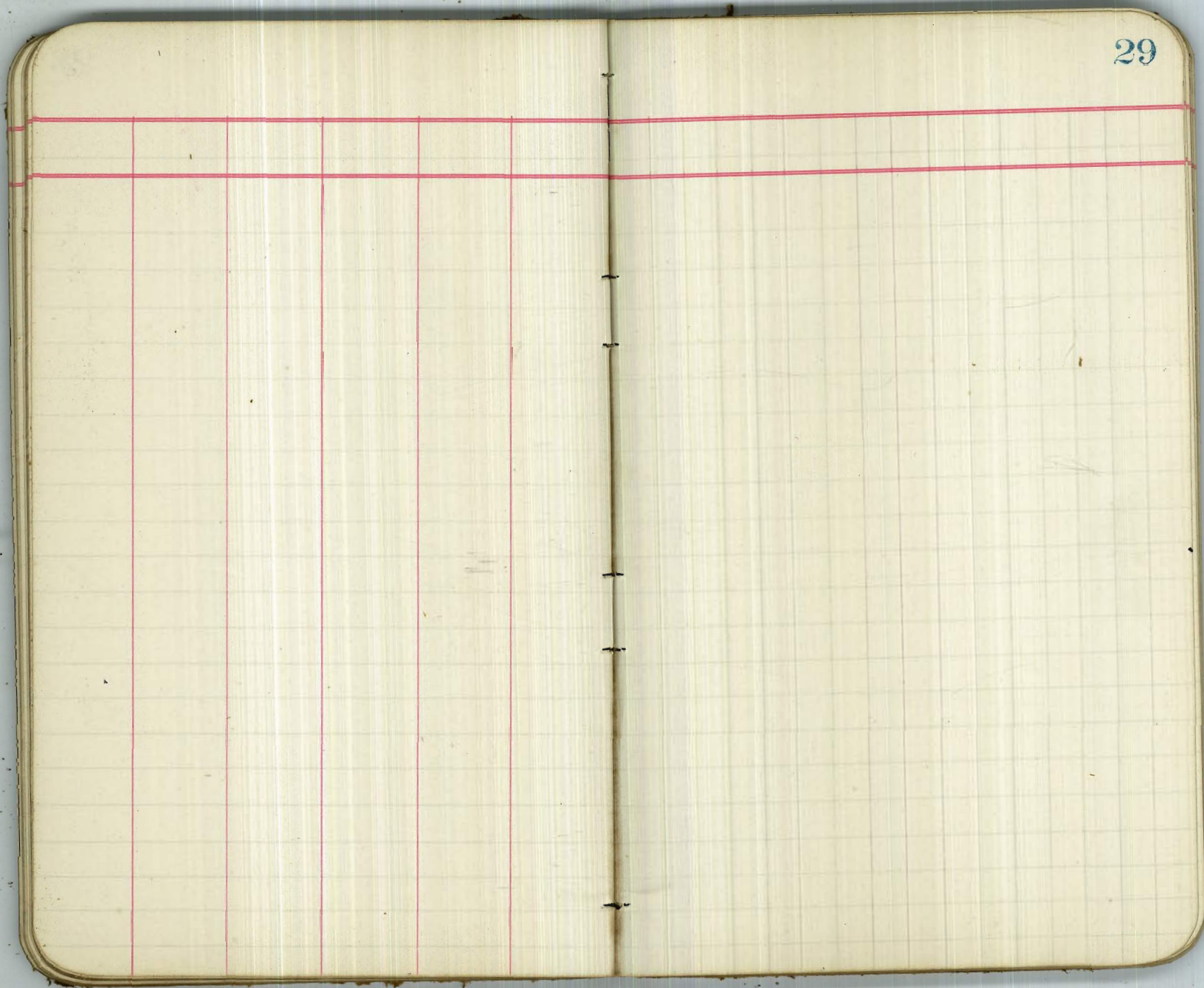
27











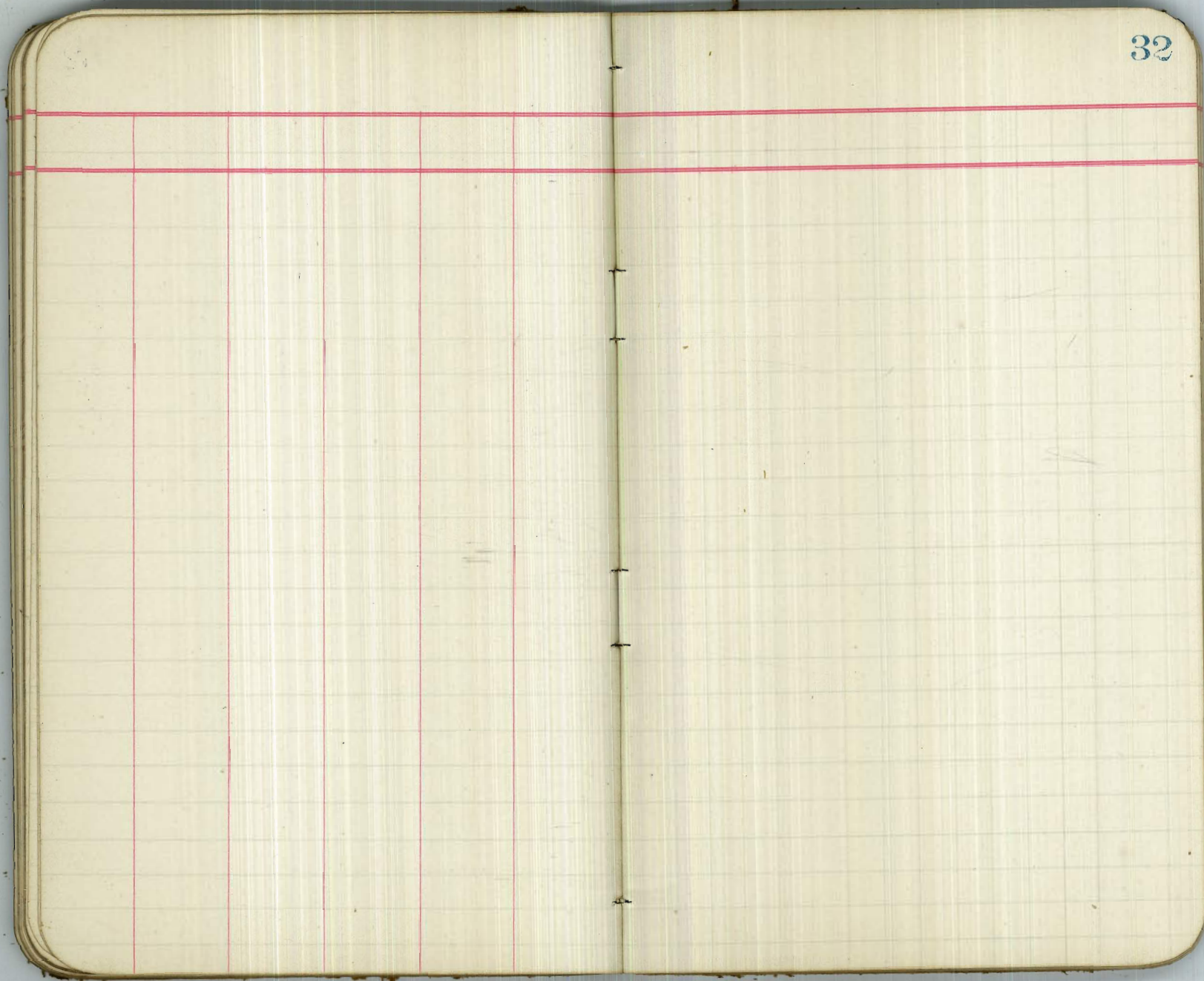






The image shows an open notebook with two pages. The left page is ruled with a grid of 6 columns and 15 rows, with two prominent red horizontal lines near the top. The right page is ruled with a grid of 15 columns and 15 rows. The number '31' is printed in the top right corner of the right page. The notebook is bound in the center, and the pages are a light cream color.

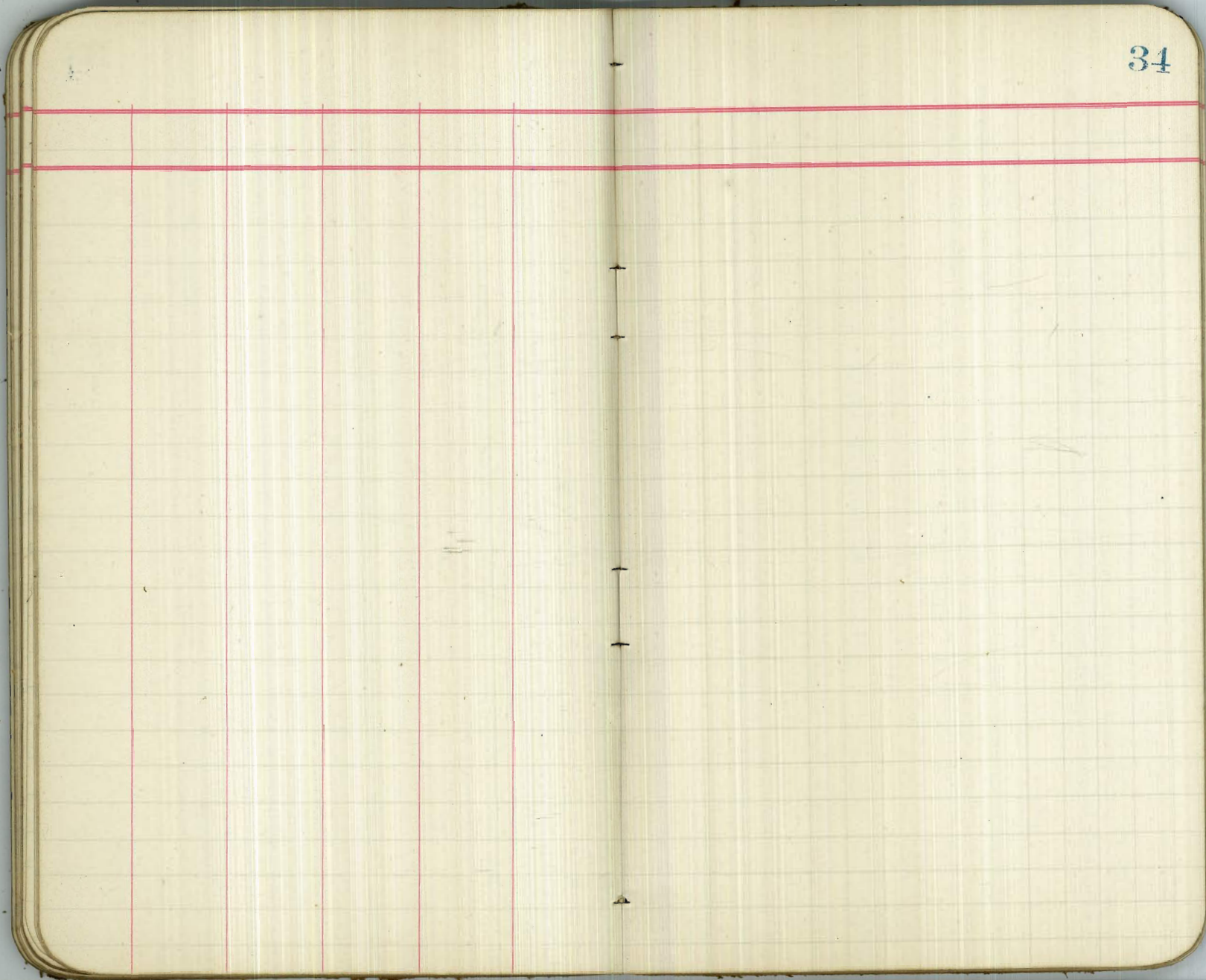






The image shows an open notebook with two pages. The left page is a ledger page with a grid of 10 columns and 20 rows. The first column is the widest, followed by four columns of equal width, and then five narrower columns. The right page is a standard grid page with 20 columns and 20 rows. The notebook is bound in the center, and the pages are cream-colored with rounded corners. The number '33' is printed in the top right corner of the right page.

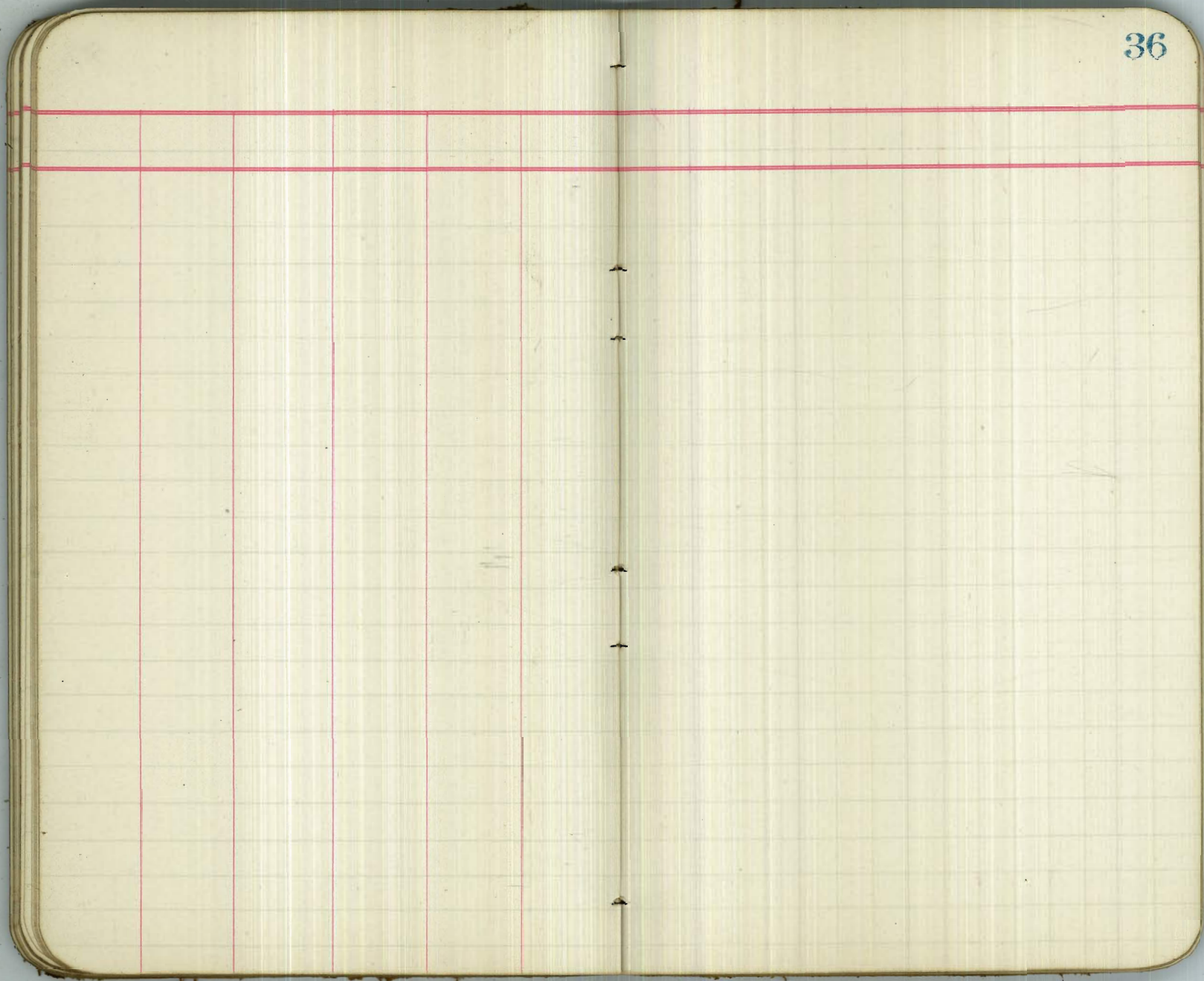




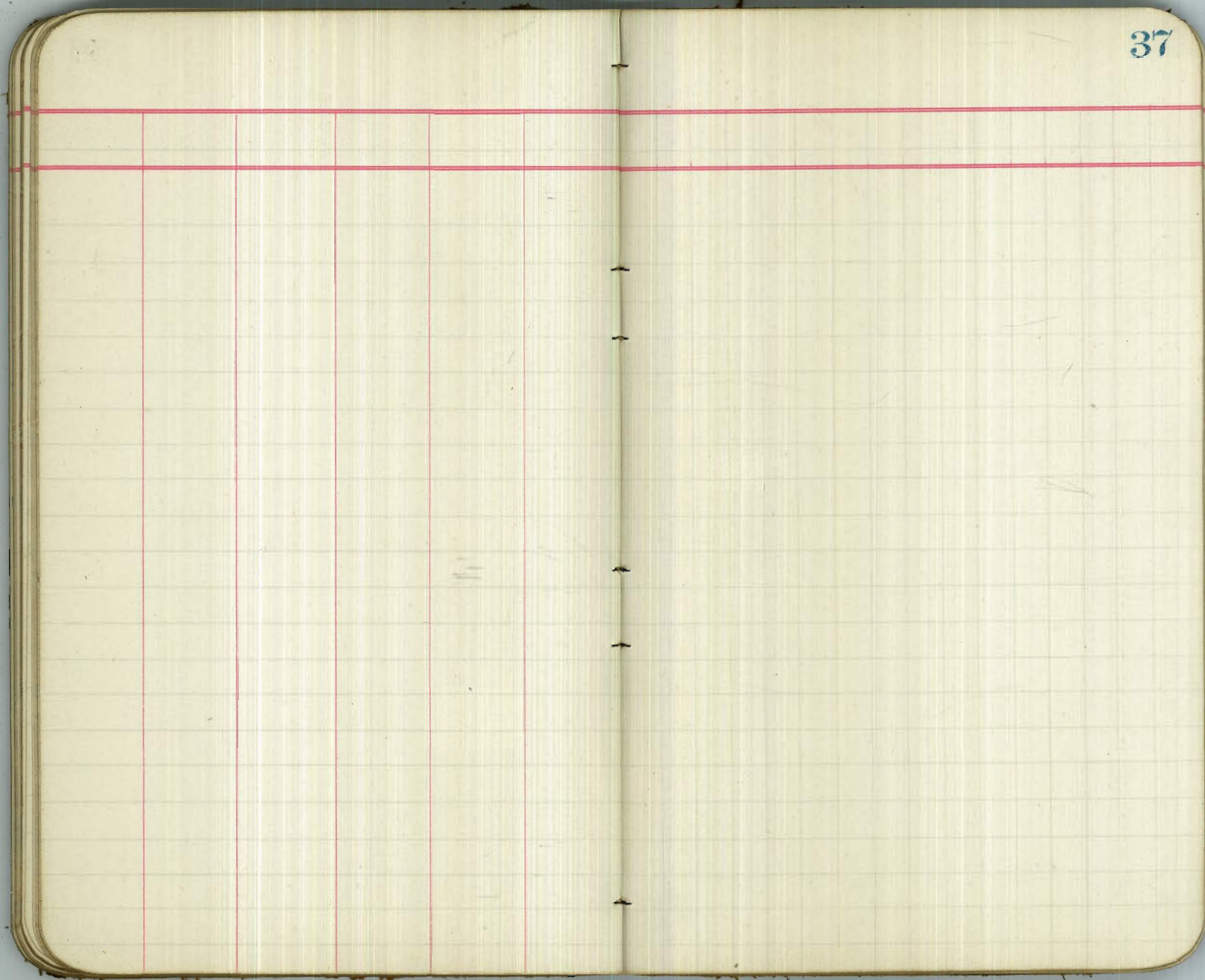




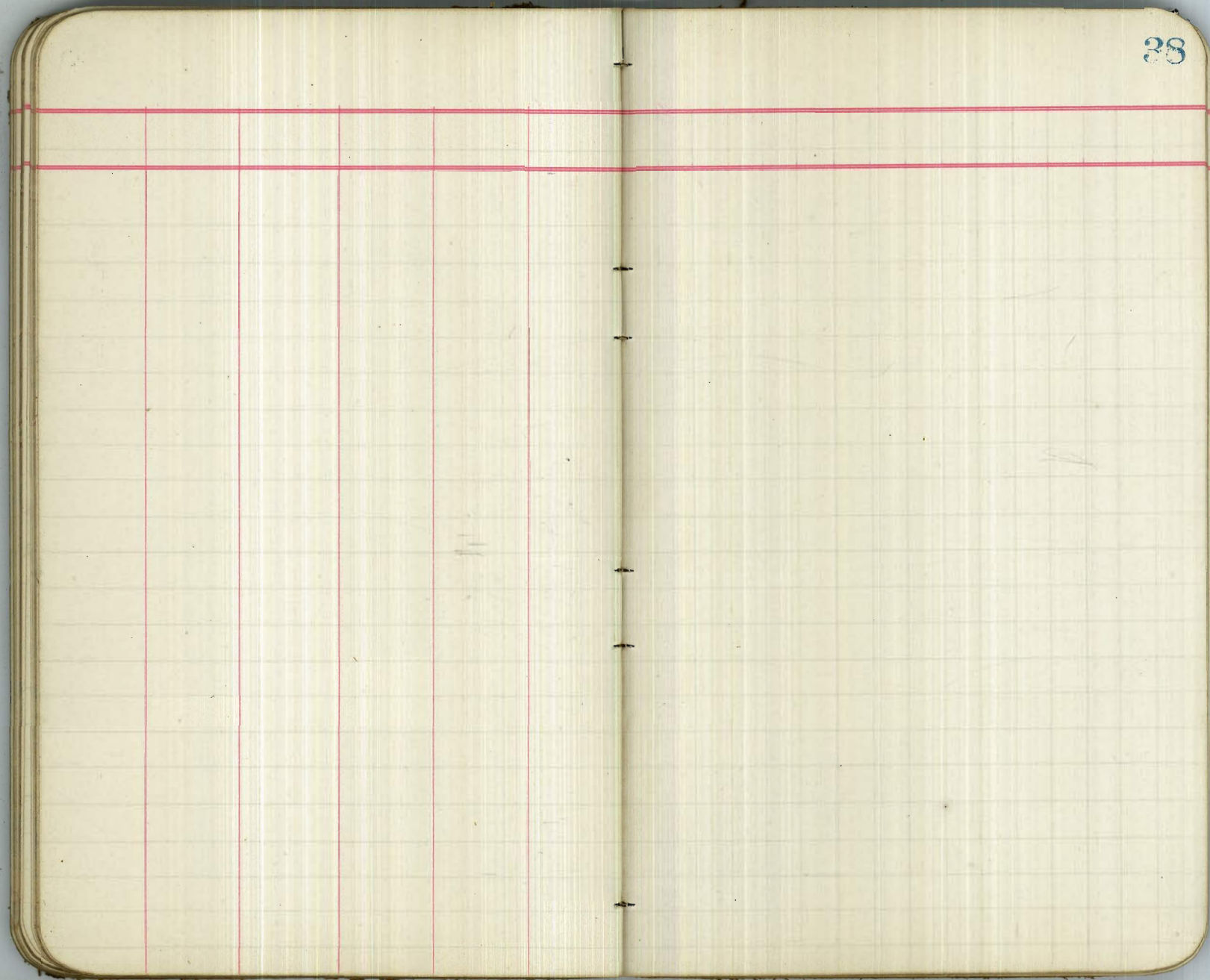












## Mound Line East of 12 vnd

Sta Elev Grade Cut Fill

66+11					✓
+13	9.47	1.70	7.77	7' 9 <sup>1</sup> / <sub>4</sub>	
+38	8.90	1.73	7.17	7' 2	
+63	6.83	1.77	5.06	5' 0 <sup>3</sup> / <sub>4</sub>	
+88	4.76	1.80	2.96	2' 11 <sup>1</sup> / <sub>2</sub>	
67+13	3.70	1.84	1.86	1' 10 <sup>3</sup> / <sub>4</sub>	
+38	3.18	1.88	1.30	1' 3 <sup>5</sup> / <sub>8</sub>	
+63	2.82	1.91	0.91	0' 10 <sup>7</sup> / <sub>8</sub>	
+88	2.48	1.95	0.53	0' 6 <sup>3</sup> / <sub>4</sub>	
68+13	2.61	1.98	0.63	0' 7 <sup>5</sup> / <sub>8</sub>	
+38	2.66	2.02	0.64	0' 7 <sup>5</sup> / <sub>8</sub>	
+63	3.08	2.06	1.02	1' 0 <sup>1</sup> / <sub>4</sub>	
+88	4.09	2.09	2.00	2' 0"	
69+13		2.13			
+38		2.17			
+63		2.20			
+88		2.24			
70+13		2.27			
+38		2.31			
+63		2.34			

67+18

12 13 1/2 81



Main line East of 2<sup>nd</sup> St

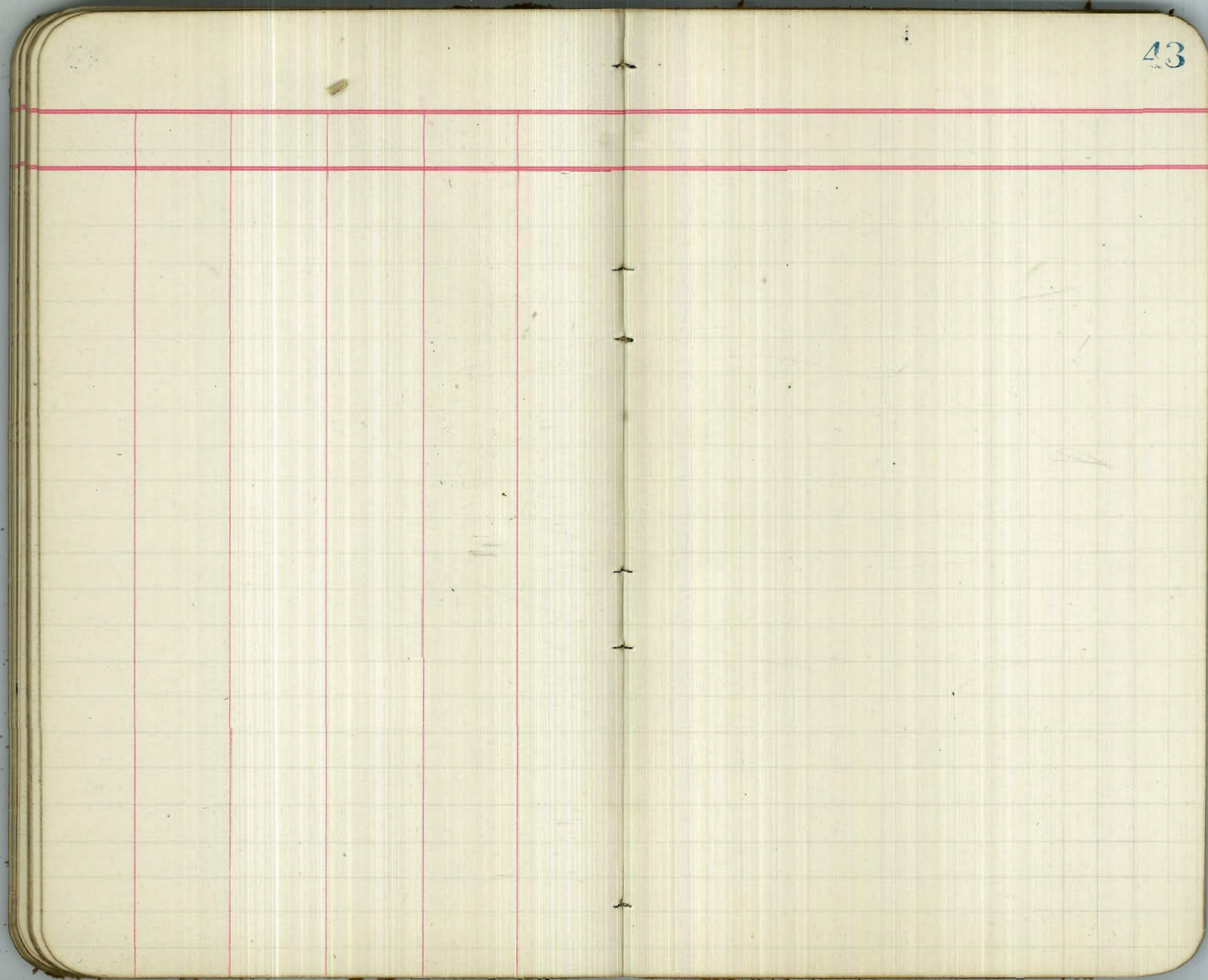
Sta Elev grade cut Lill

70+88	2.38
71+13	2.42
+88	2.45
+63	2.49
+88	2.52
72+13	2.56
+88	2.59
+63	2.63
+88	2.66
73+13	2.70
+88	2.74
+63	2.77
+88	2.81
74+13	2.84
+88	2.88
+63	2.91



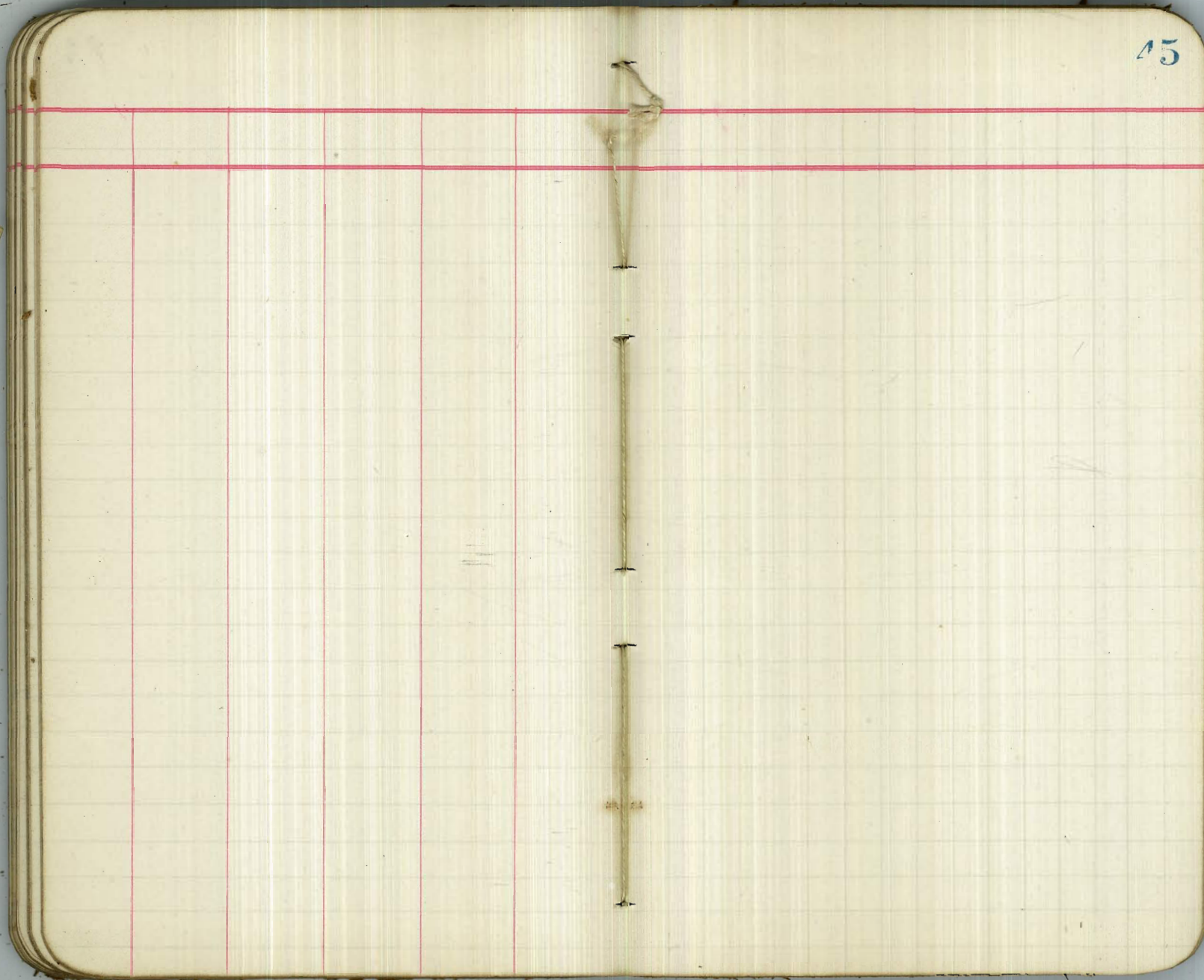


22

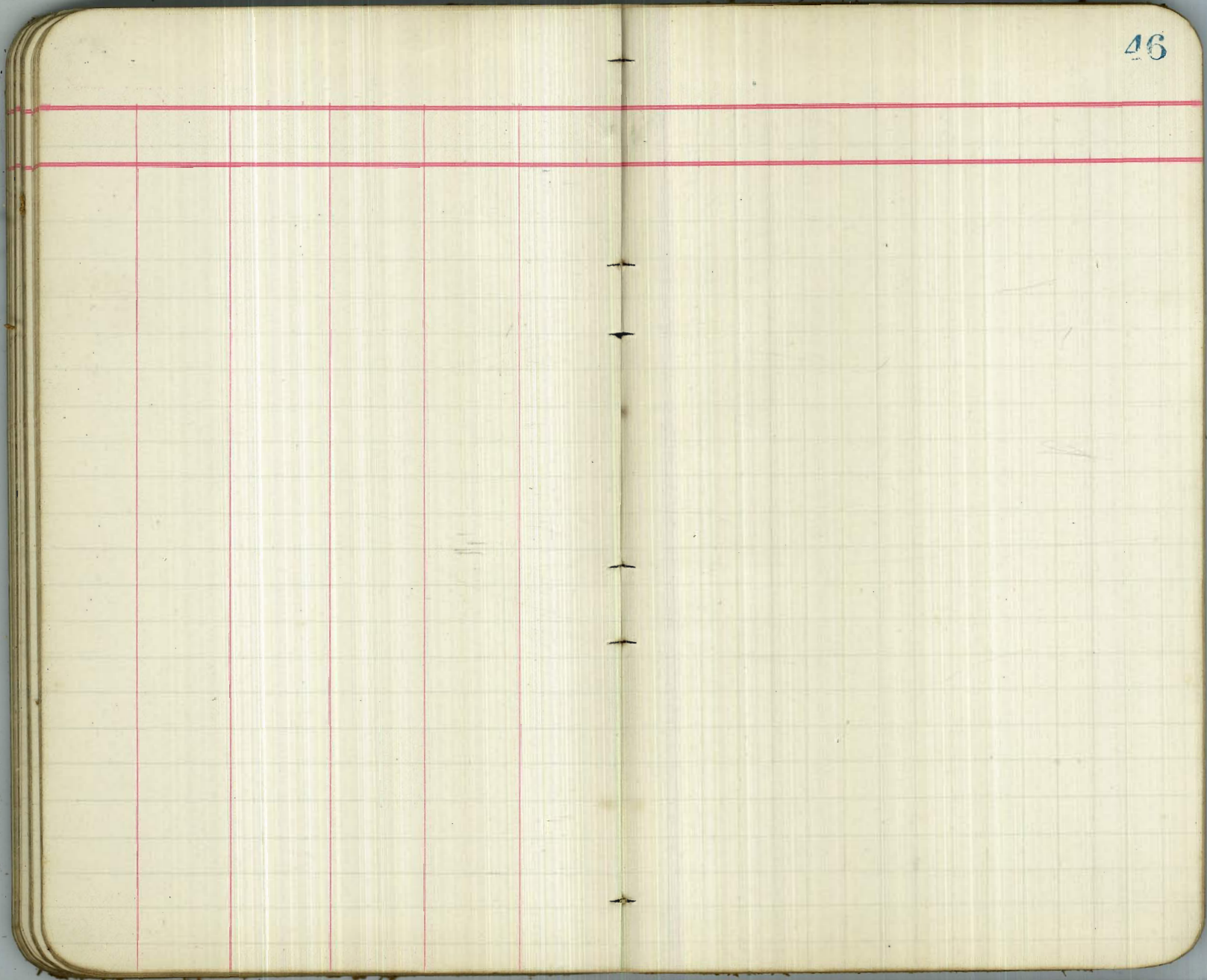


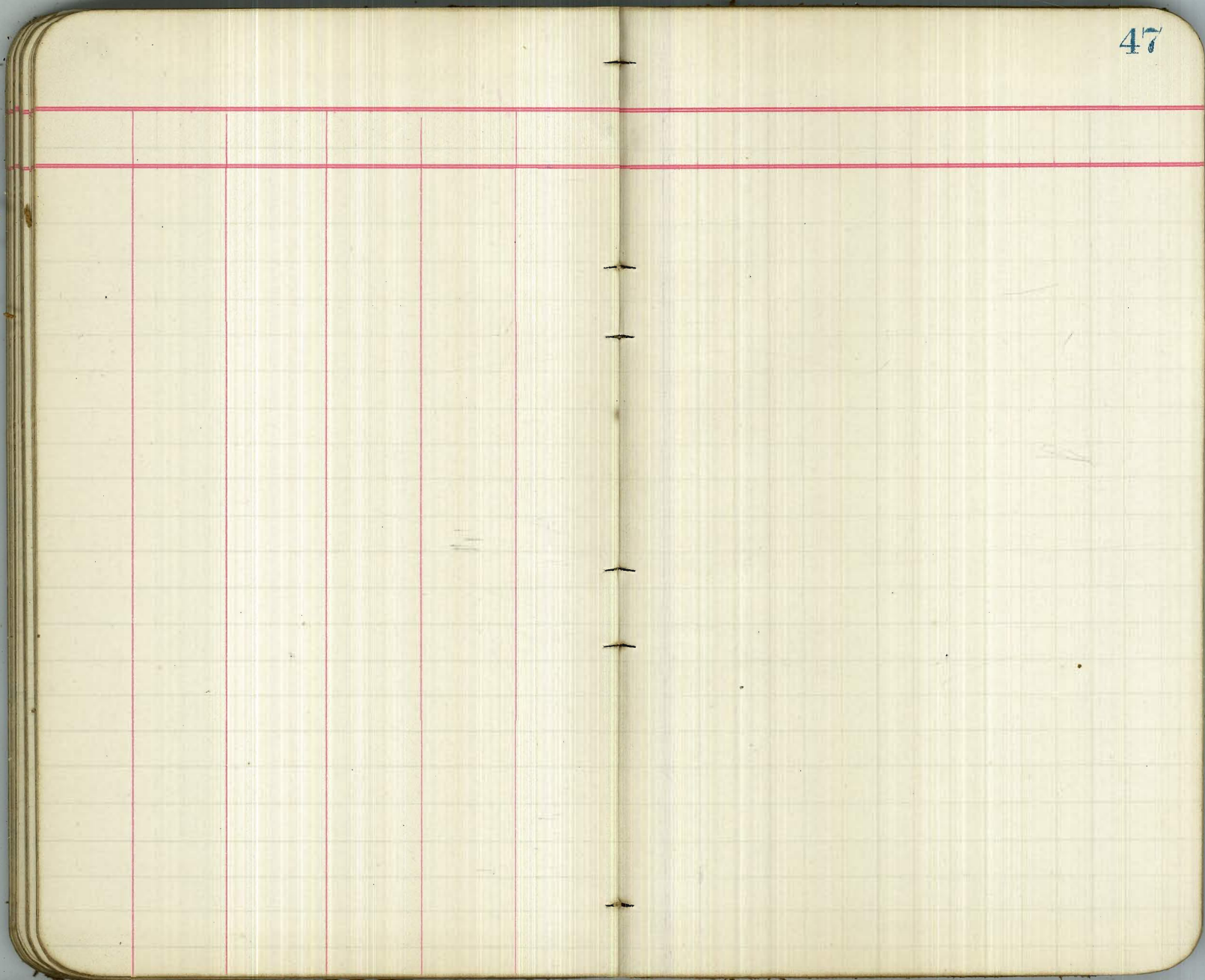


The image shows an open notebook with two pages. The left page is a ledger page with a grid of red lines. It has a top header section, a second horizontal line below it, and then a grid of 10 columns and 20 rows. The right page is a standard grid page with a grid of 20 columns and 20 rows. The notebook is bound in the center with visible stitching.

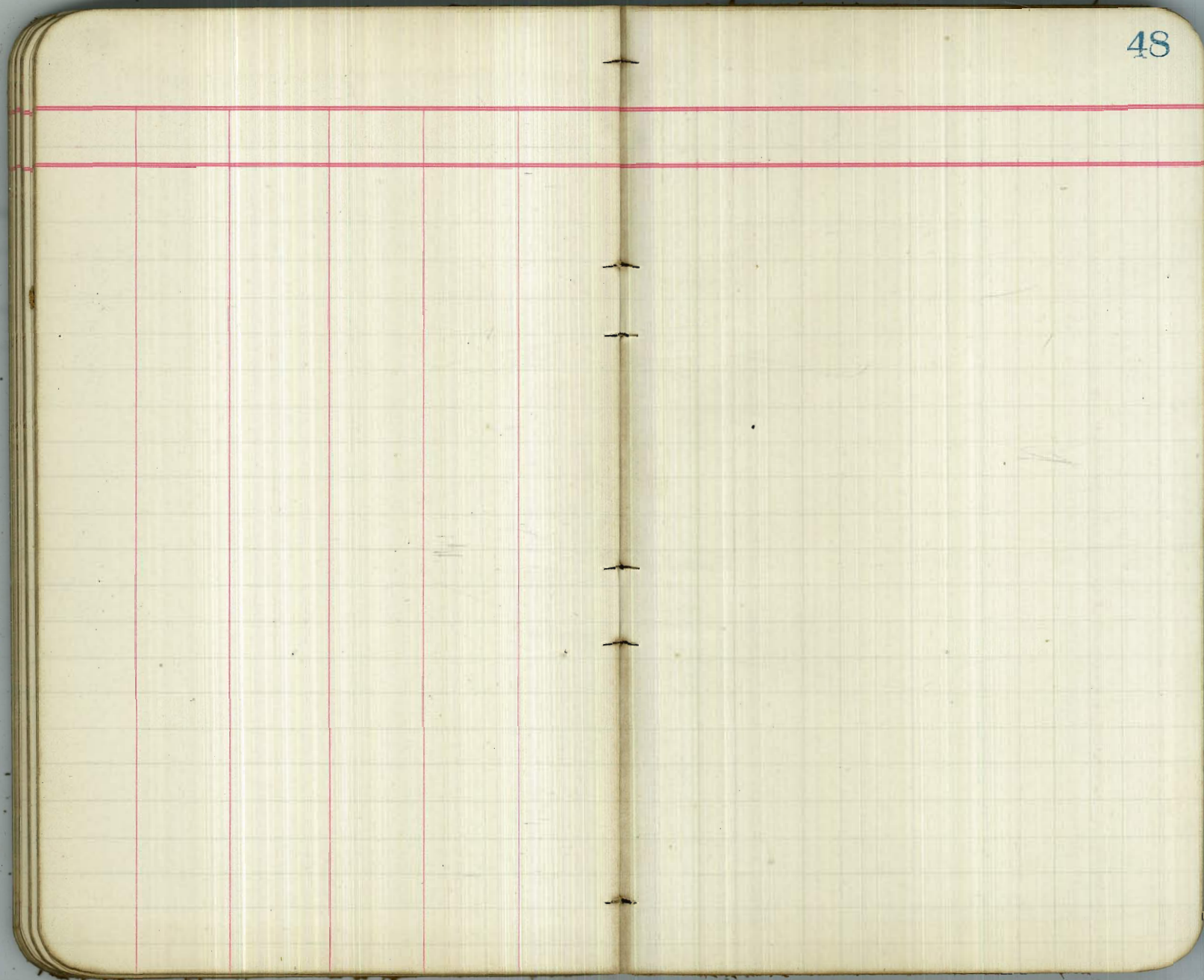
















63.23

4.11

67.34

2.92

64.42

2 10

52

792

4.24

82

5,06

67.34

5.06

62.28



36.04 86.03 50.58  
 2.86  
 33.18

1178 9527 63.08  
 8596

1425 9.527  
 3216 9.31  
 23442 85.96  
 11.79

2484 58.08  
 144 744  
 23.41 7  
 50.56 9.527  
 930

15734 676  
 15125 6540  
 63.50  
 6312 85.97  
 8.10  
 8.08

10068 1084  
 1058 14065  
 14156 0.16  
 8.10  
 8.08

128.52 13156  
 4.84 96  
 123.65 64  
 17

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			100.00	0.44	100.00	0.87	99.99	1.31	87
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	86
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	85
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	84
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	83
5	99.45	8.72	99.58	9.15	99.54	9.58	99.50	10.02	82
6	99.25	10.45	99.41	10.89	99.36	11.32	99.31	11.75	81
7	99.03	12.19	99.20	12.62	99.14	13.05	99.09	13.49	80
8	98.77	13.92	98.97	14.35	98.90	14.78	98.84	15.21	79
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	78
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	77
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	76
12	97.81	20.79	97.72	21.22	97.68	21.64	97.58	22.07	75
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	74
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	73
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	72
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	71
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	70
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	69
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	68
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	67
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	66
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	65
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	64
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	63
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	62
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	61
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	60
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	59
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.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

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