

SEWER Y's
15TH STREET
NORTH OF L

14 17 + 18

16⁵

9

TRANSIT.

F.B. 733

C. Street running
East from 14th

733

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.
1	2½	21	49	41	95½
2	4½	22	51½	42	98
3	7	23	53½	43	100½
4	9½	24	56	44	102½
5	11½	25	58½	45	105
6	14	26	60½	46	107½
7	16½	27	63	47	109½
8	18½	28	65½	48	112
9	21	29	67½	49	114½
10	23½	30	70	50	116½
11	25½	31	72½	51	119
12	28	32	74½	52	121½
13	30½	33	77	53	123½
14	32½	34	79½	54	126
15	35	35	81½	55	128½
16	37½	36	84	56	130½
17	39½	37	86½	57	133
18	42	38	88½	58	135½
19	44½	39	91	59	137½
20	46½	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.
°		°		°		°	
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

1/2th Street
 running north

West	East	West	
			5x97
	2x57	5x95	
2x55			5x10 $\frac{1}{2}$
	2x81 $\frac{1}{2}$	5x10 $\frac{1}{2}$	
2x29 $\frac{1}{2}$			4x86
	2x07	4x84	
2x05			4x81 $\frac{1}{2}$
	1x82	4x59 $\frac{1}{2}$	
1x80			4x97
	1x57	4x95	
1x55			4x12
	1x33	4x10	
1x31			
	1x07	3x50	Cont. of East
1x05			
	0x82		Inspection 3x92 out S. L. K. St
0x80			
	0x57		3x07
0x55		9x05	
	0x34		2x82
0x32		2x80	

North of L Street 1

for K Street

15th Street North

of L Street

2

W	C	W	E
	8x41 $\frac{1}{2}$		
28x89 $\frac{1}{2}$			
	8x17		
28x15			
	7x92		
27x90			
7x90	6 in z for J street		
7x28	6 in z " " "		
	6x87	9x92	over
14x85	9x90		
	4x61	9x64	
14x59	9x64		
	4x35	9x41	
14x34	9x39		
	4x11 $\frac{1}{2}$	9x17	
14x92 $\frac{1}{2}$	9x15		
	5x85 $\frac{1}{2}$	8x90 $\frac{1}{2}$	
15x83 $\frac{1}{2}$	8x83 $\frac{1}{2}$		
	5x61 $\frac{1}{2}$	8x66	
15x59 $\frac{1}{2}$	8x64		

West side
East side

15 th street		North of	
W	E	W	E
			15+41
		13+99	
	12+96 1/2		14+96 1/2
2	12+94 1/2	14+94 1/2	
	12+72		14+47
2	12+70	14+45	
	12+45 1/2		14+22
2	12+43 1/2	14+20	
	12+21		13+97
1	12+19	13+95	
	11+96 1/2		13+71
1	11+94 1/2	13+59	
	11+72		
1	11+70	North line of street	
	11+10	6 m by	
1	10+08	4 m by	
	10+55	South line of street	
1	10+64		
	10+41 1/2		13+46 1/2
1	10+39 1/2	13+44 1/2	
	10+16 1/2		13+22
1	10+14 1/2	13+20	

3
I street

Capes
in street
on street

25 ft back of property line

East
West of street

15th street North

W	E	W	E
			20785-
2197942	177952	20783	20785- <i>over</i>
			20780L
219770	17792	20782	
			20784L
2177432	177452	20782L	
			20760
19720	17722	20708	
			19786
16795-	16799	19784	
			19761
16770	16772	19759	
		18799	6 in of for S
167432	157452	18799	6 in of for S
			187452
16719	16721	18748	
			18720L
15794	15794	18718L	
15770	15772	Property line North line	of H street

Street running West
Street running East

15th Street running

West

W	E	W	E
	24+37½		
224+07½	23+90		
223+88	50 ft apart the 3 are		
	23+41		property line F street
223+99			
	22+98		line for F street
22+76	line for F street running		
	22+35		
22+93			
	22+12		
22+10			
	21+84½		
21+82½			End of
	21+60	25+90½	
21+58	25+88½		
	21+35½	25+41	
21+33½	25+39		
	21+09½	24+90	
21+07½	24+88		

East line is all right
West

pipe on 15th to man hole
on South line of E street

E
C street morning

East to 16th street

North South

2 2+07

2 2+05

1 1+89

1 1+84

1 1+61

1 1+59

1 1+37

1 1+35

1 1+12

0 1+10

0 0+87

0 0+85

0 0+61 $\frac{1}{2}$

0 0+59 $\frac{1}{2}$

0 0+48

0 0+41

over

This is all right 16 $\frac{1}{2}$ ft of arc apart

16th street running

North to D street

	W	E	W	E	W	E	W	E	W	E	W	E	W
	5+51												
5+49			7+80				11+11		12+00 1/2			15+00	
	5+24 1/2	7+98			9+04 1/2	11+09		12+56 1/2		16+54			
25+22 1/2			7+56	9+02 1/2			10+84 1/2		12+34			15+40 1/2	
	4+99	7+54			8+80	10+82 1/2		12+34		16+38 1/2			
24+97			7+30	8+78			10+60 1/2		12+09 1/2			16+16	
	4+78	7+28			8+55	10+58 1/2		12+07 1/2		15+14			End pipe
24+74			7+06	8+54			10+34 1/2		11+84	15+87	15+89	17+18	
	4+51	7+04			8+30	10+32 1/2		11+84		15+54	16+56	17+18	no E
14+49			6+81 1/2	8+28			South line E		11+51	15+38	15+40	17+18	no West
	4+25 1/2	6+79 1/2			8+06	9+56	9m	11+59		15+14	15+16	17+18	cin
14+28 1/2			6+55	8+04			9+31		11+35	14+68	14+50		16+90
	3+99 1/2	6+53	cin pipe now			9+29		11+83		14+63 1/2	14+65 1/2	16+88	
13+97 1/2										14+37 1/2	14+39 1/2		
	3+96 1/2	5+96	end of 8 pipe							14+13 1/2	14+5 1/2		
13+74 1/2										13+54	cin of West for B		
	3+51	Yours nice Dated								South line B.M.			
03+49												13+36	
	3+26	5+76	In							13+09	13+11		
03+24										12+83	12+85		
	3+01	in 4 in y in 16" meet on the North line of E street											
2+99	making at 25 ft from property line up 16" street												

D. Street running East

from 16th to 17th on D. Street 8

W S

2+282 sin y for 17th running south

West of 17th street 33rd on
33rd back of line of 17th
2+08 for on D. Street

1+90

1+88

1+55

1+53

1+392

1+372

1+142

1+122

0+90

0+88

0+65

0+63

0+40

3+21

0+38

0+19

1+12 17th on D. Street

17th street running North from

West East

	5x20 1/2	
5x18 1/2	4x9 1/2	
4x8 1/2	4x7 1/2	
4x6 1/2	4x4 1/2	
4x4 3/4	4x21	
4x19	3x97	
3x95	3x72	5x82
3x70	3x47	5x69
3x45	3x21	5x48 1/2
3x19	2x94	Property line of D th street
2x94		

curb up to

D street

to street over

running North Cent of 17th from C
of property line South of C street

Running North on 17th

31 Co street running

N	S	N	S	N	S
	9+20				
9+18		11+98 1/2		14+00 8m	
West line of	11+96 1/2	Inspection the same			
8+40 8m	11+40	6m by running south			
	11+38				
	8+13 1/2	10+94		13+74	
8+11 1/2	10+92		13+72		
	7+89	10+69		13+50	
1+87	10+67		13+48		
	7+65	10+45		13+23 1/2	
7+53	10+43		13+21 1/2		
	7+38 1/2	10+19		12+99	
7+35 1/2	10+17		12+97		
	7+15	9+95		12+94	
7+13	9+93		12+92		
	5+88 1/2	9+68 1/2		12+49 1/2	
6+84 1/2	9+66 1/2		12+49 1/2		
	6+62	9+44		12+24 1/2	
6+60	9+42		12+22 1/2		
	6+40	East line of 17 th street			
6+38					

East from 17th street

for 19th street
 this 4" is 30ft back of Inspect
 instead as marked at post

running East

C Street running East

from 19th street

11

	WN	S	N	S	
9		West line 21 st		18499 $\frac{1}{2}$	
				18499 $\frac{1}{2}$	
9		16475- Jms		18453 $\frac{1}{2}$	
		16454 $\frac{1}{2}$	18451 $\frac{1}{2}$		
		16452 $\frac{1}{2}$	16442	reducer 8 to 6 ^m	
8		16429			
		16427		18429	
1		16405-18429			
		16408		18408 $\frac{1}{2}$	
7		15798 $\frac{1}{2}$	18401 $\frac{1}{2}$		
		15496 $\frac{1}{2}$		17499 $\frac{1}{2}$	
7		15454	17497 $\frac{1}{2}$		
		15452		17453 $\frac{1}{2}$ East line	of 21 st street
7		15430	17451 $\frac{1}{2}$		
		15428			
6		15403 $\frac{1}{2}$	16498	6 ^m running	South for 21 st street
		15401 $\frac{1}{2}$			
6		14499 $\frac{1}{2}$	16491	6 ^m running	North for 21 st street
		14477 $\frac{1}{2}$			
6		14418		6 ^m running	South for 20 th street

E. street running East from 21st street to 22nd

N Y

9+

901

8+

1+

7+

7+

7+

6+

6+

6+

19495 End of pipe on E street running 20ft into 22nd street

19474 Con of running South for 22nd street

19472 Con of running North for 22nd street

West line 22nd street

19455 Jms

19428 1/2

19420 1/2

19404

19402

X

22nd street south of C street

	E	W	
9+1	2+62 1/2	2+64 1/2	
9+1	2+98	2+40	
8+1	2+12 1/2	2+14 1/2	
1+8	1+88	1+90	
7+1	1+62 1/2	1+64 1/2	
7+1	1+38 1/2	1+40 1/2	
7+1	1+12 1/2	1+14 1/2	
6+8	+89	+91	
6+8	+62 1/2	+64 1/2	3+40 = N.I.S. line
	+38 1/2		3+14 End of pipe
6+1	+36 1/2		2+91
		2+89	

Entered May 11. 88

for flush Tank on

22nd morning North of

E street

	W	E	
9+18	2+69	2+69	
West 8+	2+40	2+42	
8+11 1/2	2+15 1/2	2+18 1/2	
1+87	1+90 1/2	1+92 1/2	
7+53	1+67	1+69	
7+35 1/2	1+39 1/2	1+41 1/2	
7+13	1+16	1+18	
6+85 1/2	+90 1/2	+92 1/2	
6+60	+68	3+43 = 2 I. B. 1/2	
6+38	+66	3+19	End of pipe for flush tank
	+43	2+93 1/2	
	+41	2+91 1/2	
	Entered May 10, '88		

18th Street running North from C street to A street

	West	East	
		2+90	
	2+88		5+44 $\frac{1}{2}$
9+18	2+66	5+42 $\frac{1}{2}$	
	2+64		6+20 over
9+18	2+39 $\frac{1}{2}$	5+18	
	2+37 $\frac{1}{2}$		4+9 $\frac{1}{2}$
	2+15	4+94	
8+1	2+13		4+70 $\frac{1}{2}$
	1+90 $\frac{1}{2}$	4+68 $\frac{1}{2}$	
1+8	1+88 $\frac{1}{2}$		4+44 $\frac{1}{2}$
	1+66	4+42 $\frac{1}{2}$	
7+8	1+64		4+21 North line of B street
	1+39 $\frac{1}{2}$	4+19	
7+3	1+37 $\frac{1}{2}$		
	1+14 $\frac{1}{2}$	3+59	Sign running West for B street
7+18	1+12 $\frac{1}{2}$		
	0+90		South line of B street
6+8	0+88		3+41 Insps
	0+66		3+16
6+8	0+64		3+14
	0+44		
6+3	0+42		

if not used yet

18th street running North from C up 18th street to A street

17

M 40 e

7x21 End of pipe on 18th street

7x17

7x15

6x95

6x93

6x71

6x59

6x44 $\frac{1}{2}$

6x42 $\frac{1}{2}$

6x20

6x18

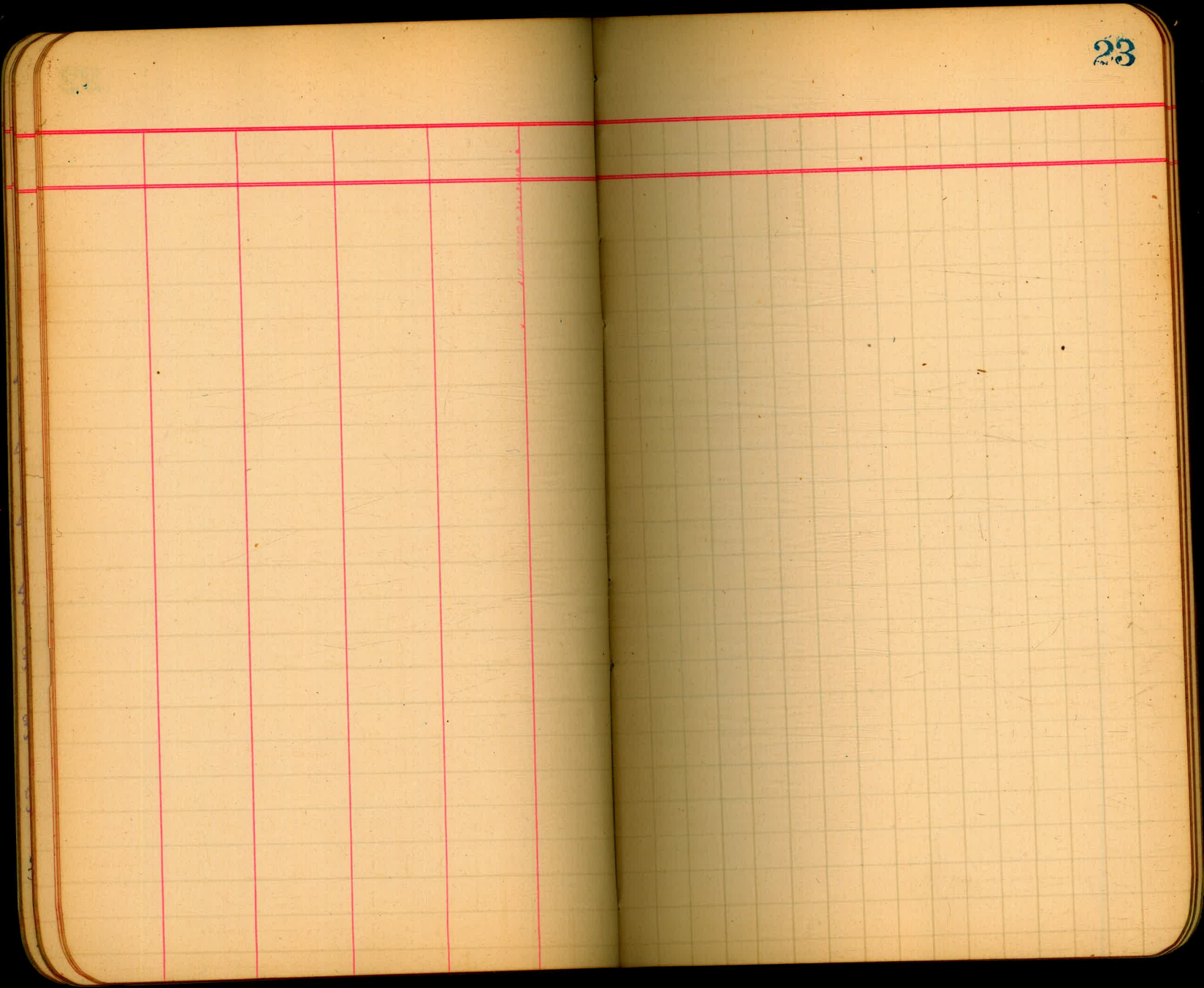
5x94

5x94

5x70

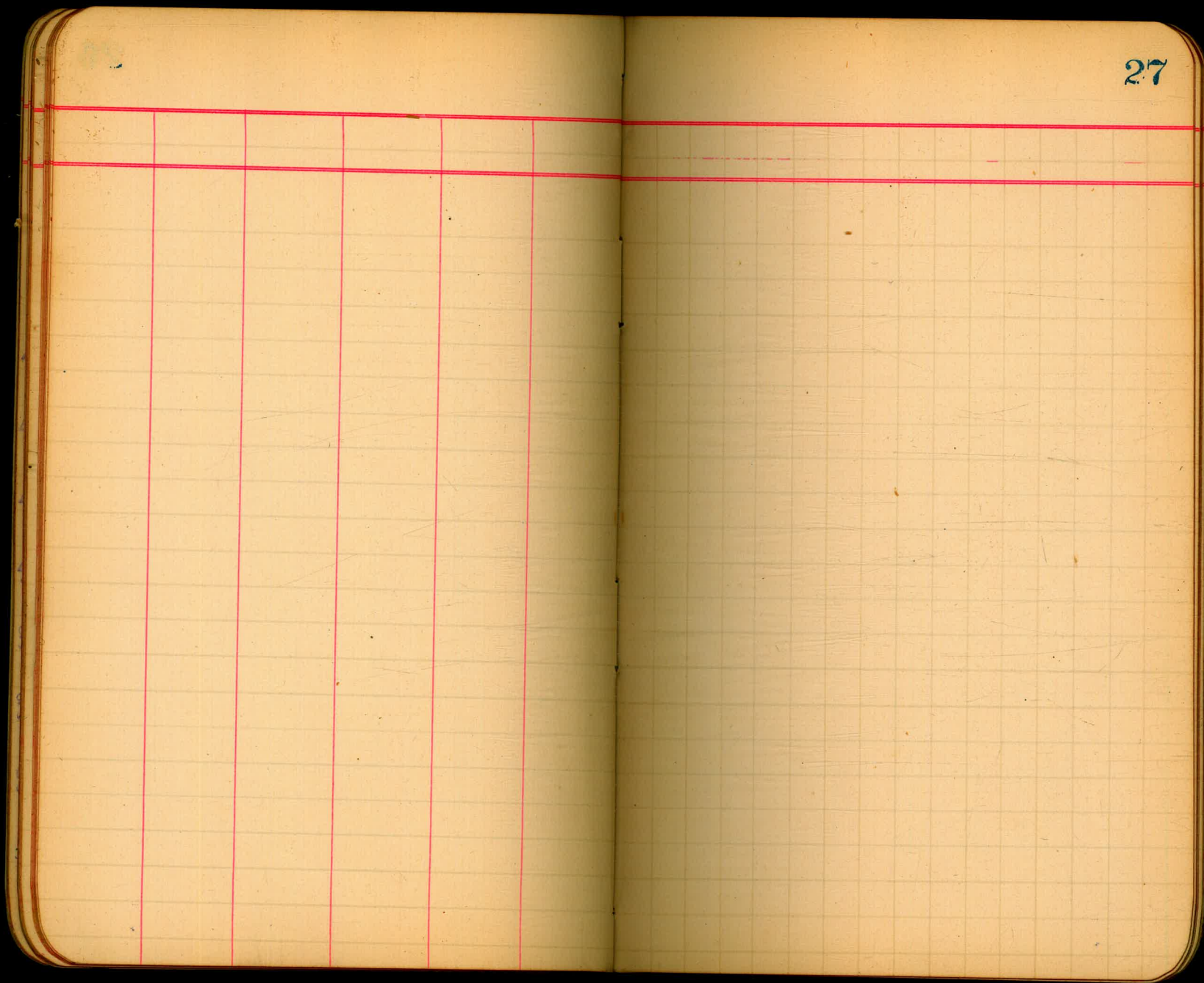
5x68

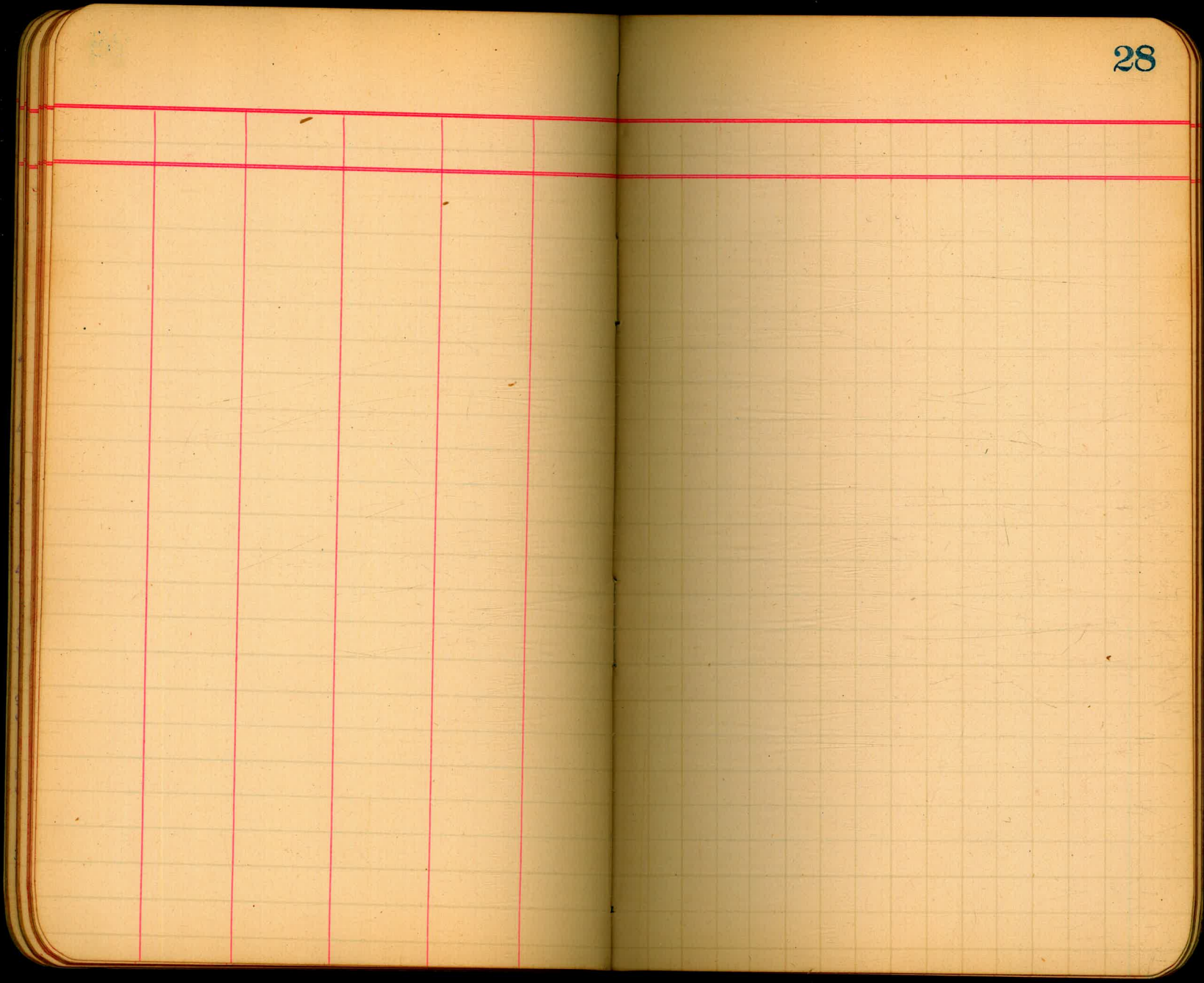
6x

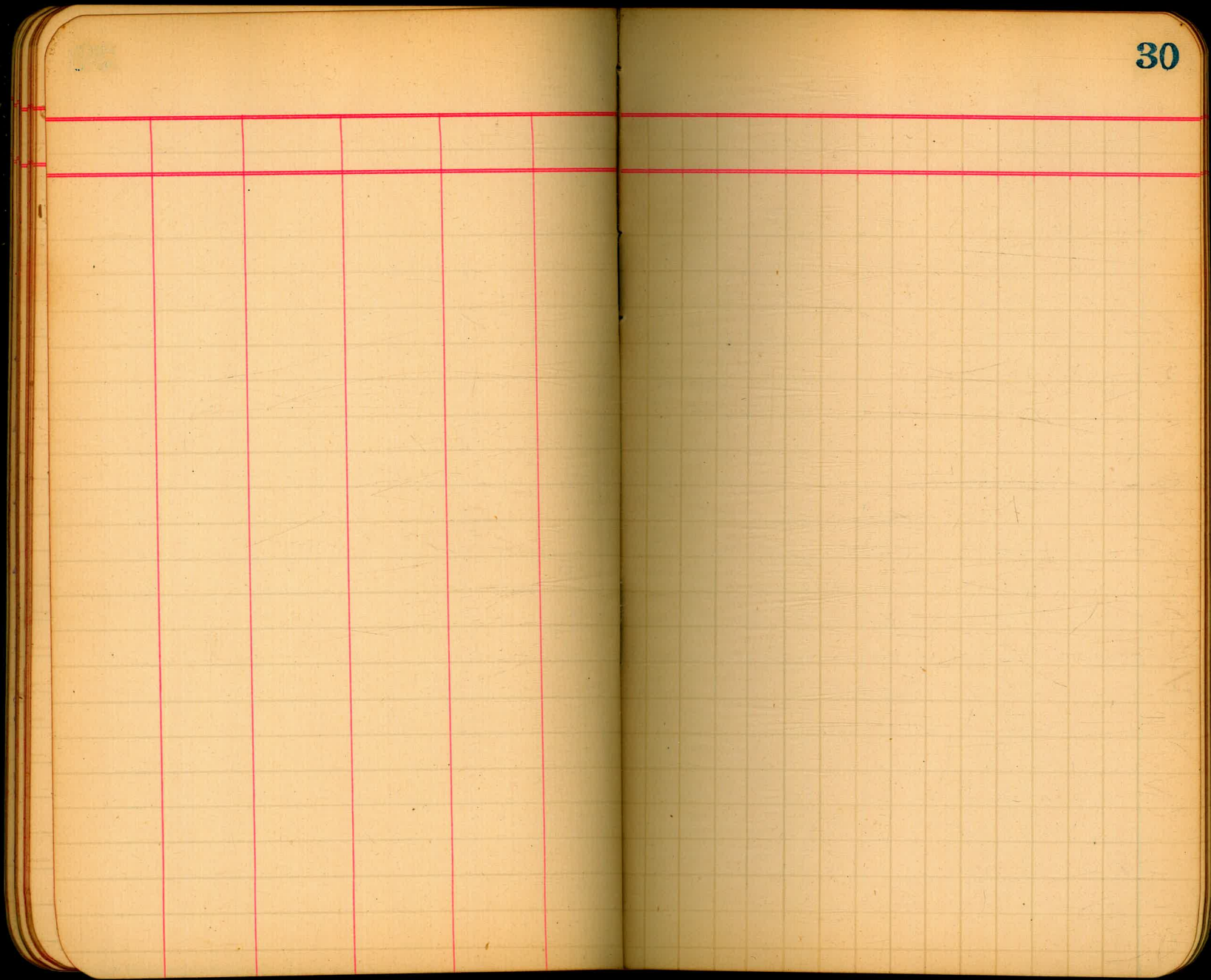


The image shows an open notebook with two pages. The left page is ruled with a grid of light blue lines and features six vertical red lines that create a table with six columns and fifteen rows. The right page is ruled with a grid of light blue lines, forming a square grid of fifteen columns and fifteen rows. The number '24' is printed in the top right corner of the right page. The notebook is placed on a white surface against a black background.

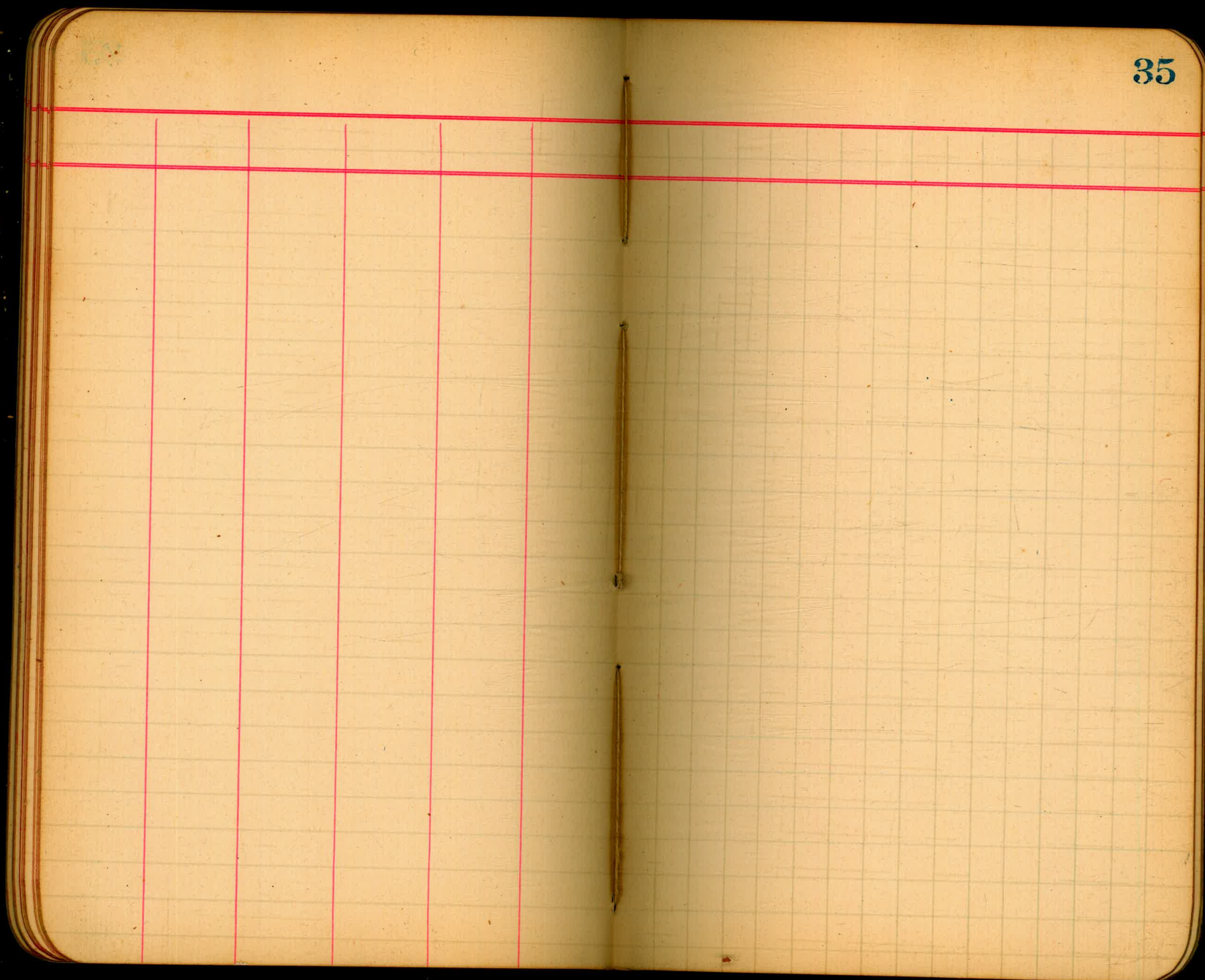
27





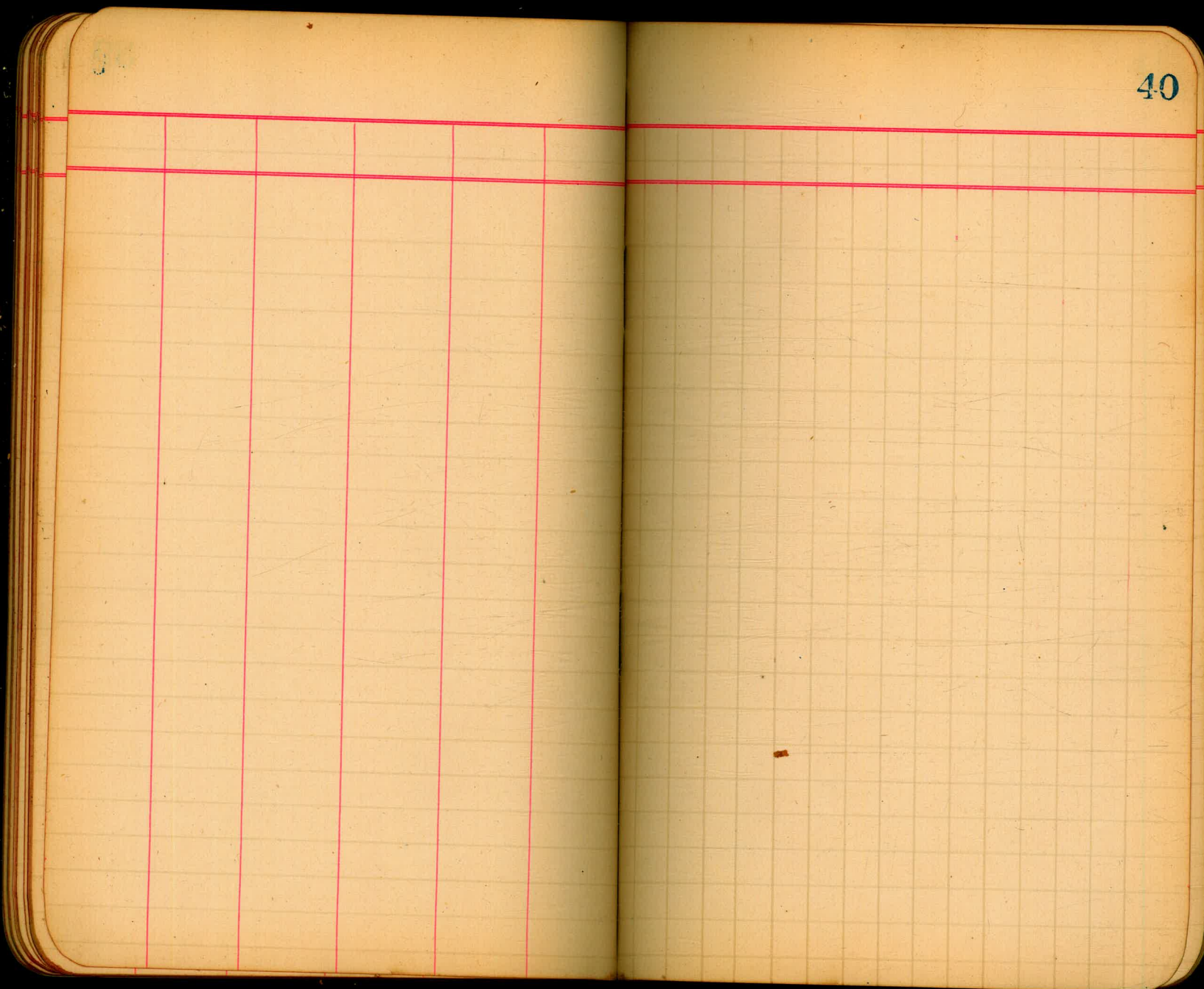


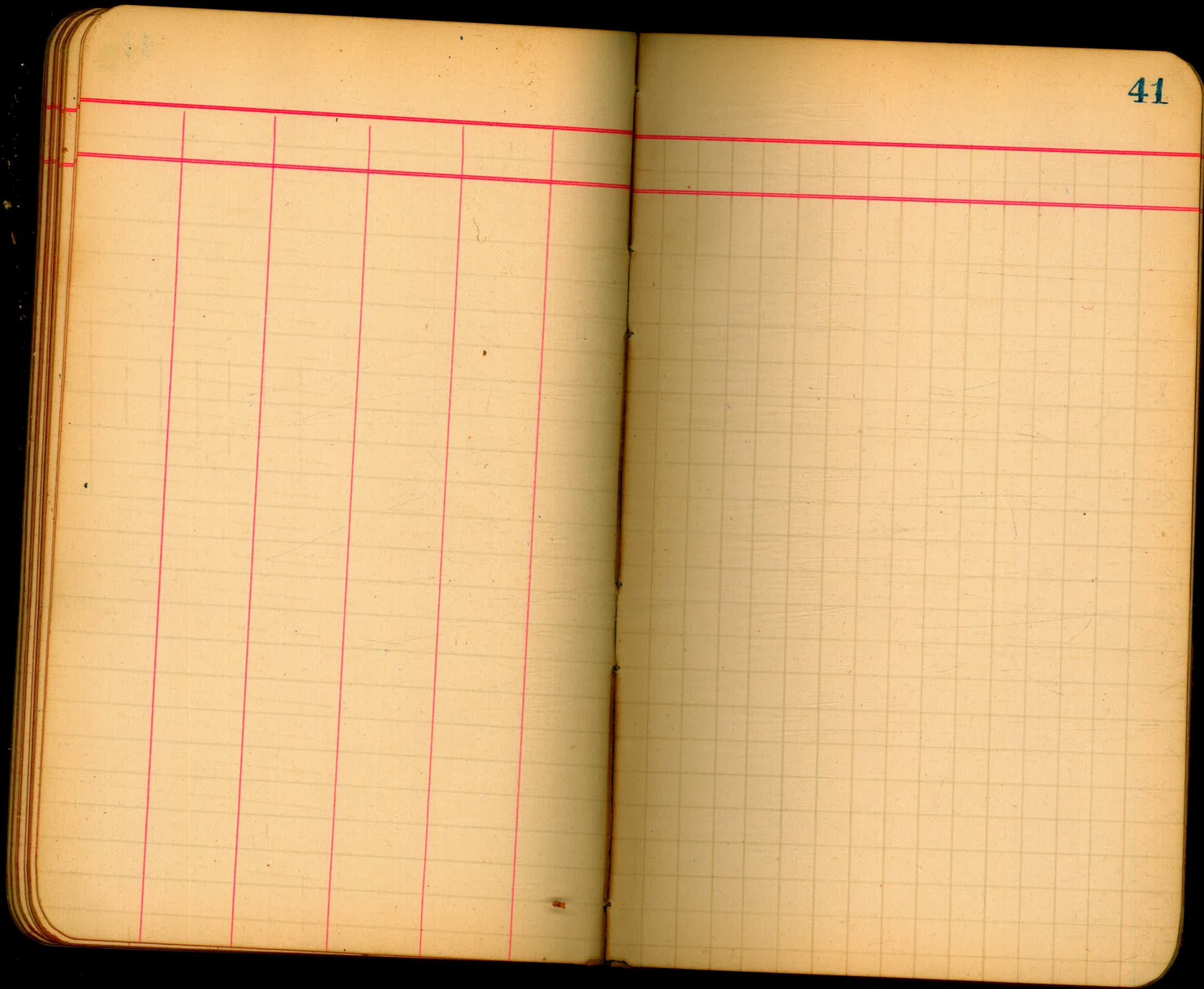
The image shows an open notebook with two pages. The pages are a light tan or cream color. The left page is ruled with horizontal lines and features five vertical red lines that create six columns of varying widths. The right page is ruled with a standard grid pattern of small squares. Two horizontal red lines are drawn across both pages, one near the top and one near the bottom, effectively creating a header and footer section on both pages. The number '34' is printed in the top right corner of the right page.

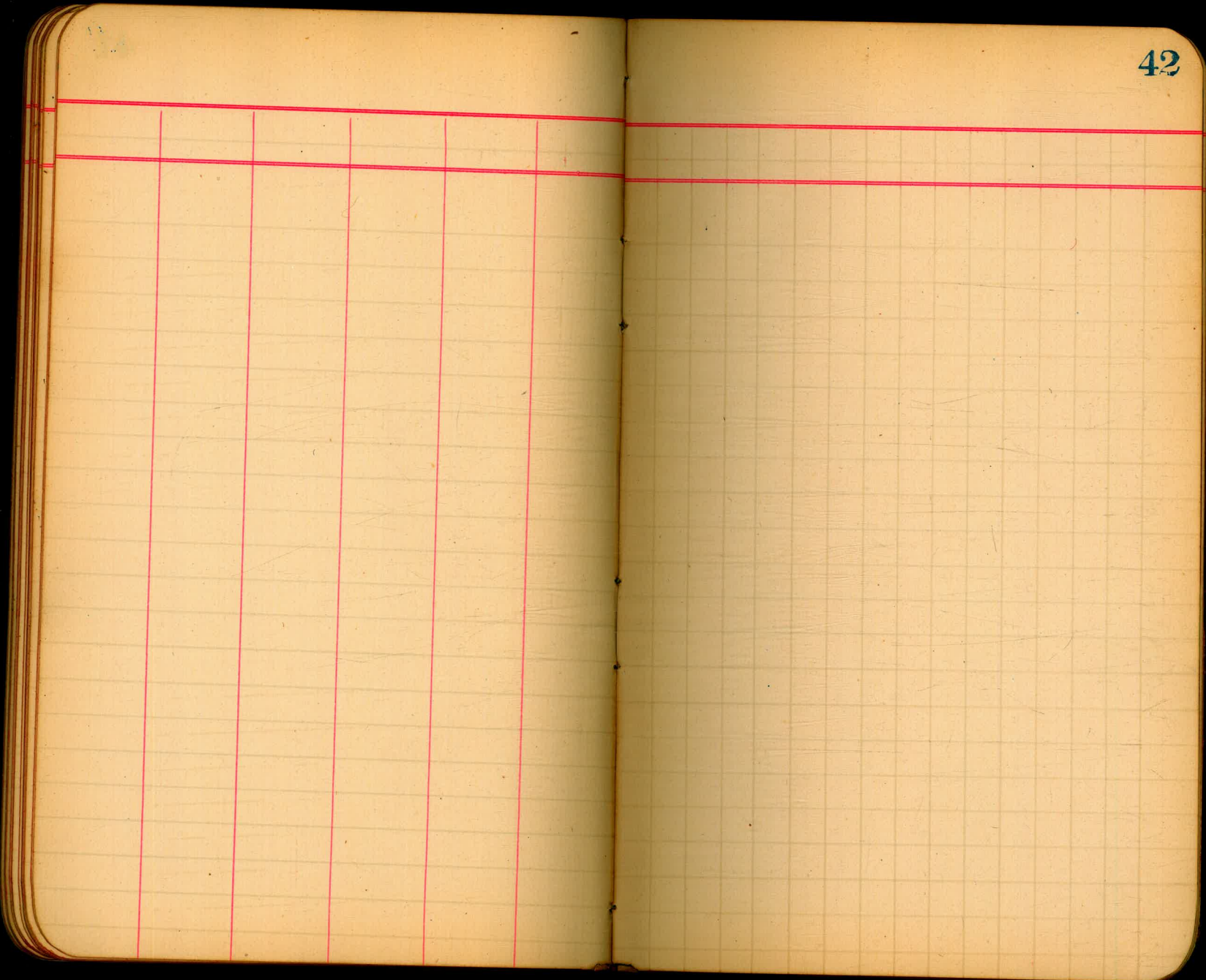


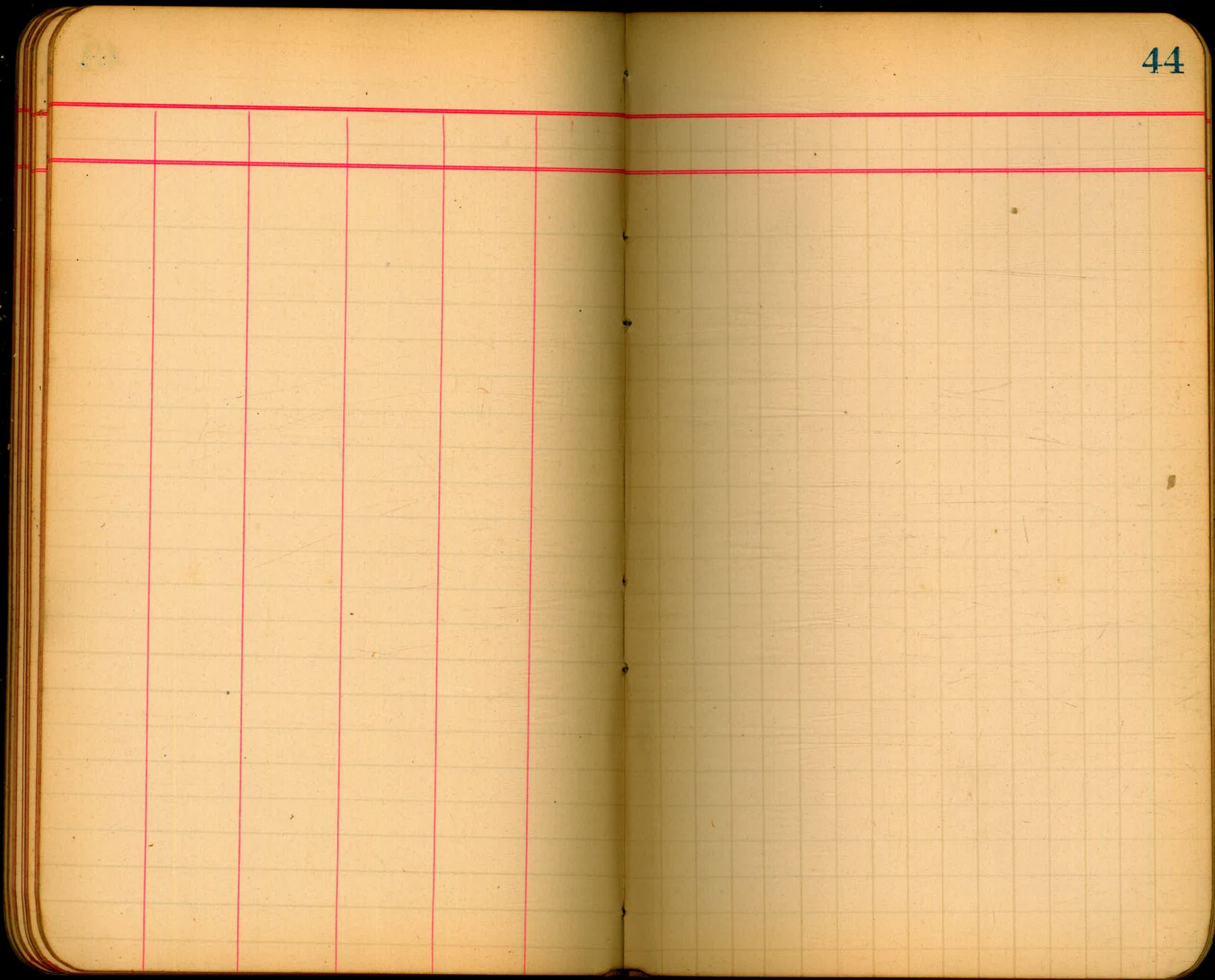
The image shows an open notebook with two pages. The left page is a ledger page with a grid of 10 columns and 20 rows. The columns are defined by vertical red lines, and the rows by horizontal blue lines. The right page is a standard grid page with a 20x20 grid of blue lines. The number '36' is printed in the top right corner of the right page. The notebook has a light brown cover and the pages are slightly aged.

The image shows an open notebook with two pages. The left page is ruled with horizontal lines and features five vertical red lines that create six columns of varying widths. The right page is ruled with a full grid of horizontal and vertical lines. The number '38' is printed in the top right corner of the right page. The notebook is placed on a white surface against a black background.









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 six vertical lines that divide the page into seven columns of varying widths. The right page is a standard grid page with a uniform grid of light green lines. The notebook is placed on a white surface, and the background is black.

16th street running North

from D street

15 -
 14 -
 13 -
 12 +
 11 -
 10 -
 9 -
 8 -
 7 - 11 70
 6 -
 5 - 1066
 4 + 104
 3 -
 2 -
 1 -

25
 184
 1861
 1845
 118

Caesars words
Commenced on
Feb 3rd 1858

1909
 1845 -
 134

1961
 1880
 80

1851
 1851
 120

94
 84
 114

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	84
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	83
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	82
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	81
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	80
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	79
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	78
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	77
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	76
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	75
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	74
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	73
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	72
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	71
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	70
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	69
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	68
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	67
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	66
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	65
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	64
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	63
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	62
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	61
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	60
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	59
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	58
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	57
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	56
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	55
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	54
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	53
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	53.10	52
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	51
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	50
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	49
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	48
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	47
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	46
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	45
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	44
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	43
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	42
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	41
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	40
45	70.71	70.71							39
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		