

SAN DIEGO SEYERS

LOCATION OF Y'S on

Front.

Union

Columbus

9

TRANSIT

F.B. 688

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.....	16¾	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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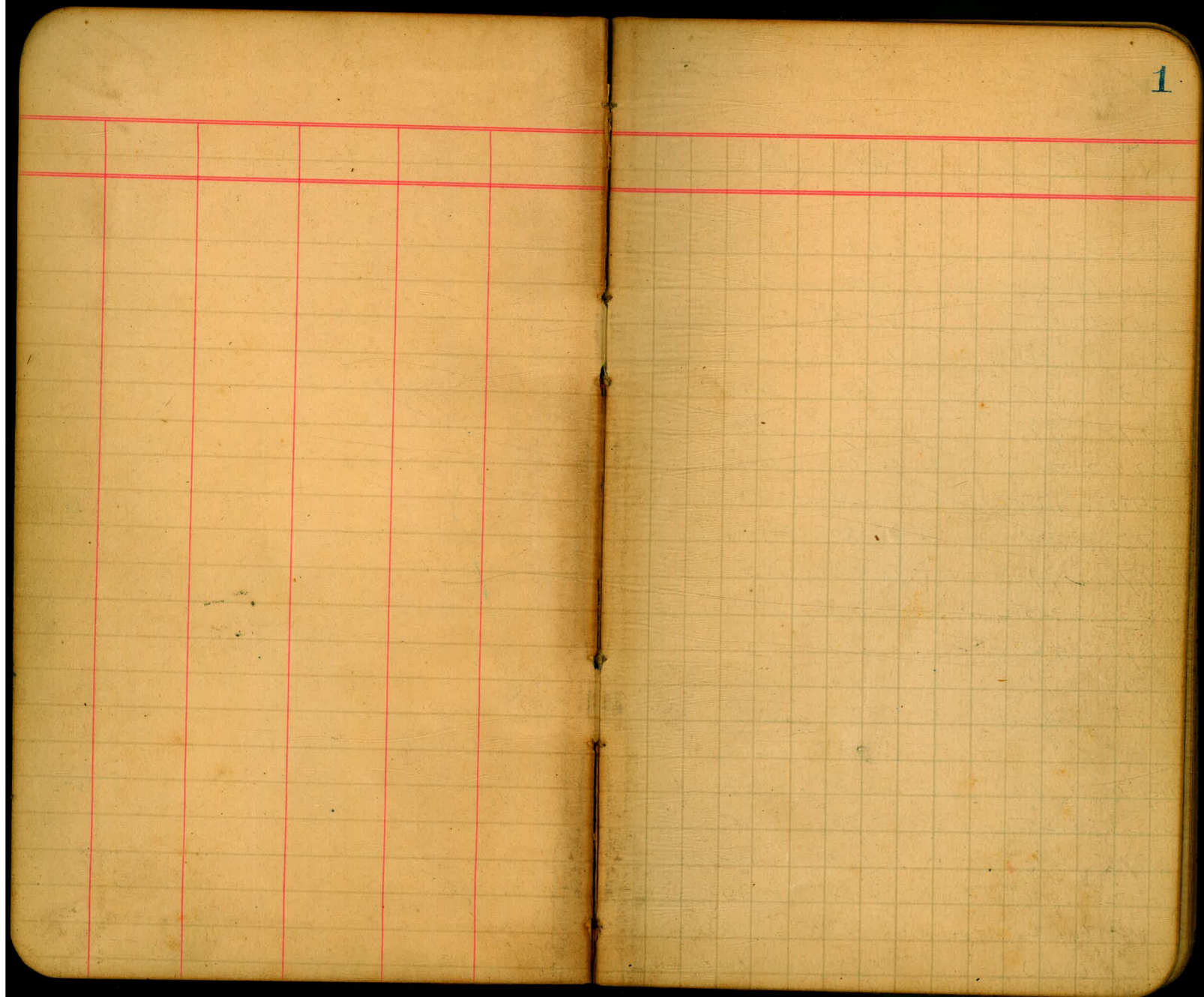
SAN FRANCISCO, CAL.

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.

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	1-21	16	4-02	23	8-64	30	15-47
10	1-55	17	4-56	24	9-47	35	22-07

A. T. Covel
San Diego
Cal.
Jan. 1888



Front St

W	E	W	E
I St		6.48	6.50
140	142	.73	.75
1.225	1.245	.975	.995
.48	.50	7.22	7.24
.73	.75	.475	.495
.97	.99	.72	.74
2.225	2.245	8.40	inspec
.485	.505	H.	
.72	.74	8.780	8.805 ✓
.97	.99	9.03	9.05 ✓
3.23	3.25	.28	.30 ✓
.475	.495	.53	.55 ✓
.71	.73	.78	.80 ✓
4.00	inspec	10.03	10.05 ✓
H.		.265	.285 ✓
4.97	4.99	.535	.555 ✓
5.23	5.25	.78	.80 ✓
.475	.495	11.03	11.05 ✓
.72	.74	.28	.30 ✓
.97	6.00	.520	.540 ✓
6.21	6.23	11.80	inspec ✓

Front St

2

W	E	W	E
E. St.		17.88	17.90 ✓
12.585	12.605 ✓	18.13	18.15 ✓
12.895	.855 ✓	18.37	18.39 ✓
13.08	13.10 ✓	.625	.645 ✓
.33	.35 ✓	.88	.90 ✓
.58	.60 ✓	19.175	19.195 ✓
.83	.85 ✓	19.20	inspec ✓
14.08	14.10 ✓	A.	
.33	.35 ✓	20.48	20.50 ✓
.58	.60 ✓	.73	.75 ✓
.83	.85 ✓	.98	21.00 ✓
15.08	15.10 ✓	21.23	.25 ✓
.33	.35 ✓	.48	.50 ✓
15.495	inspec ✓	.73	.75 ✓
E.		.95	22.00 ✓
16.38	16.40 ✓	22.23	.25 ✓
.63	.65 ✓	.475	.495 ✓
.88	.90 ✓	.725	.745 ✓
17.13	17.15 ✓	.985	23.005 ✓
.38	.40 ✓	23.20	inspec ✓
.63	.65 ✓	C	

W	E		W	E		W	E		W	E
23.98	24.00	✓	29.52	29.54		37.88	37.90		47.28	47.30
24.225	24.5	✓	29.78	29.80		38.40	Inspe		47.77	47.79
475	495	✓	30.03	30.05		Beech			48.28	48.30
74	76	✓	30.28	30.30		39.17	39.19		48.78	48.80
995	25.015	✓	30.52	30.54		39.675	39.695		49.28	49.30
25.23	25	✓	30.77	Inspe	✓	40.18	40.20		49.53	49.55
47	49	✓	A.			40.68	40.70		49.80	Inspe
73	75	✓	31.58	31.60		41.18	41.20		elm	
98	26.00	✓	32.08	32.10		41.68	41.70		50.58	50.60
26.23	25	✓	32.58	32.60		45.20	Inspe		51.08	51.10
485	505	✓	33.07	33.09		Cedar	✓		51.58	51.60
73	75	✓	33.58	33.60		43.78	43.80		52.07	52.09
27.00	Inspe	✓	34.07	34.14		43.48	43.50		52.57	52.59
B			34.37	34.44		44.77	44.79		53.07	53.09
27.78	27.80		34.60	Inspe		44.48	44.50		53.33	53.35
28.03	28.05		Ash			44.98	44.10		53.60	Inspe
275	295		35.38	35.40		45.48	45.50			
515	535		35.88	35.90		46.73	46.75		54.38	54.40
775	795		36.37	36.39		46.00	Inspe		54.88	54.88
29.02	29.04		36.88	36.90		Sate			55.88	55.88
2.28	30		37.38	37.40		46.72	46.79		55.88	55.88

✓ Front Street

Front St

✓ 4

W	E	W	E
54.61	54.63	59.425	59.445
.86	.88	.88	.70
55.11	55.12	.925	.945
.875	.895	60x18	60x20
-.63	.65	.435	.455
.86	.88	.685	.705
56.10	56.12	.935	.955
.36	.38	61x20	Inspection South
.625	.645	○ line Hawthorn	
.88	.90	61.58	6 in Y East for Hawthorn
57.125	57.145	61.98	62.00
57.40	Inspection south	62.23	62.25
line Grape		.475	.495
57.58	6 in Y east for Grape	.72	.74
58.18	58.20	.975	.995
.41	.43	63.225	63.245
.68	.70	.48	.50
.92	.94	.715	.735
59.18	59.20	.98	64.00
		64.23	64.23

W	E
64.47	64.49
.73	.75
65.00	Inspection south
line of Ivy	
65.18	6 in Y East for Ivy
.785	65.805
66.03	66.05
.275	.295
.53	.55
.77	.79
67.03	67.05
.275	.295
.53	.55
.78	.80
68.035	68.055
.27	.29
68.55	end of pipe in flush tank
Entered May 14 th 1888	
<u>Entered</u>	

UNION

W E W E

Union South
of Ark

E W

Union South
of Jasper

E W

0x51 775 102 26 52 76 1x89 end of Pipe
Flushtank
Entered

0x53 795 204 28 54 78

0x37 62 88 1x12 38 62 88 2x12 38 2x65 Suspect in north
line of Jay 2x84 - 6 in Vent
3x42 67 93 4.18 42 68 93 5.17 43 67.5 92 6.18 6x45 end of
pipe for Flushtank
Entered

0x39 64 90 1x14 40 64 90 2x14 40

38 40 64 90

38 40

38 40

38 40

38 40

38 40

38 40

38 40

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38 40

UNION
North of I

6

W	E		W	E		W	E		W	E
1.02	1.04					6.73	6.75		12.485	12.505
.23	.25					.98	7.00		.735	.755
.48	.50					7.23	7.25		12.99	13.01
.715	.735					.47	.49		13.24	.26
.775	.995					.73	.75		.485	.505
2.22	2.24					8.00	Imprec		.73	.75
.48	.50						ll.		.98	14.00
.73	.75					8.725	8.745		14.235	.255
.97	.99					.98	9.00		.48	.50
3.23	3.25					9.225	9.245		.73	.75
.48	.50					.48	.50		.98	15.00
.73	.75					.72	.74		15.23	.25
4.00	Imprec					.965	.985		15.50	Imprec
						10.225	10.245		6	
4.97	4.99					.47	.49		16.24	16.26
5.22	5.25					.73	.75		.485	.505
.47	.49					.985	11.005		.73	.75
.73	.75					11.23	.25		.985	17.005
.98	6.00					.49	.51		17.23	.25
6.23	6.25					11.75	Imprec		.49	.51
.48	.50						f.		.74	.76

UNION STREET.

W	E	W	E
17.98	18.00	24.24	24.26
18.235	255	.485	.505
.45	.50	.725	.745
.73	.75	.945	25.005
98	19.00	25.23	25.25
19.25	Inspect	.485	.505
D		.73	.75
20.48	20.50	.98	26.50
.74	.76	26.22	24
.99	21.01	.48	.50
21.23	21.25	.74	.76
.49	.51	27.00	Inspect
.73	.75	18	
.99	22.01	27.77	27.79
22.235	255	28.03	28.05
.49	.51	.28	.30
.73	.75	.58	.55
.98	29.00	.78	.80
23.20	Inspect	29.03	29.05
#	C	.27	.29
24.00	24.02	.53	.55

Union
North of Ash

W	E	W	E
056	0x58	29.77	29.79
80	82	30.03	30.05
1.05	1.07	.28	.30
30	32	.54	.56
55	57	30.78	Inspect a.k.
79.5	81.5	31.59	31.61
2x05	2x07	.835	.855
29.5	31.5	32.01	32.10
.55	.57	.33	.35
.795	81.5	.58	.60
3.05.5	3.07.5	.53	.55
30	32	33x2	14
3.57	Inspectia	10 end of pipe	
50.	line Beach	<u>Entered used 1888</u>	
5x75	6 in V	end of pipe is 150 feet	
east for Beach		South of 2x Ash	
4.55	4.37		
605	625		
4x70	extra west		
for M. Rul			
4.85	4.87		

Union North of Cerk

W	E	W	E
5x095	5x11.5	10.15.5	10.18.5
34	36	39.5	41.5
60	62	65.5	67.5
84	86	90	92
6.10	6.12	11.14	Inspector
35.5	37.5		Late Street
.60	.62	11.32	6 in V east
85.5	87.5		for date
7.10	7.12	11.91	11.93
7.37	Inspector	12.16.5	12.18.5
South line Cedar		42.5	44.5
756	6 in V east	.68	.70
for Cedar		.93	.95
815	8.17	13.18.5	13.20.5
39.5	41.5	44	46
65	67	68.5	70.5
90	92	94	96
9.15.5	9.17.5	14.19	14.21
40.5	42.5	43.5	45.5
65	67	69	71
89.5	91.5	1496	Inspector so. line
		0	Elm

Union

W	E	W	E
		20x95.5	20x97.5
15.14	6 in V east	21x23	21x25
for Elm		.46	.48
15.73.5	15.75.5	.70.5	72.5
99.5	100.5	95	97
16.24	16.26	22x21.5	22x23.5
48.5	50.5	.46	.48
70	72.6 in V	.70.5	72.5
89	for albatross	23x03	Inspector
17.18.5	Street		South line of Grape
39		23x13 C	23x13 extra
64			V east
88			28.85
18.14		24x01	24x03
38.5		.26.5	.28.5
63		50.5	52.5
89		75.5	77.5
19x03	Inspector South	25x01	25x03
line of Fir Street		.25.5	.27.5
20x23.5		25.38	6 in V for
47.5			Brandt Street
73		25.52.5	

North of Ash } Brant Street
 Union Street } from Union

Albatross North
 from Elm

9

W	E	W	E
2578		0x19	
26025		.89	
.26		.57	
.52		.70	
.745		.965	
		1x21	
2678	end of Pipe	1x47 Inspection south line	
	on Union Flushtank	0 of Hawthorn	
		1x65 6 in Y East for	
		Hawthorne Str.	
		2x265	
		.56	
		2x75	2x77
		.98	3x00
		3x24.5	3x265
		.54	.56
		.75	.77
		.99	4x01
		4x25	x27
		.495	.515
		.75	.77
		.995	5x015
		5x27 Inspection South	
		0 line 304	
		5x45 6 in Y East for	
		304	
		6x05	6x07
		.29	.31
		.55	.57
		.795	.815
		7.05	7.07
		.29	.31
		.54	.56
		.79	.81
		8.045	8.065
		.29	.31
		.54	.56
		8x82 end of pipe	
		in Flushtank	

Entered

W	E	W	E
		0x28	
		54	
		78	
		1x04	
		28	
		53	
		78	
		2x10 Inspection Sotlar For	
		2x29 = 6 in Y East for Fla Str.	
		2x88	2x90
		5x13	5x15
		37	39
		63	65
		89	91
		4x13	4x15
		38	40
		68	65
		88	90
		5x13	5x15
		38	40
		63	65
		5x91 Inspection	
		30 line of Grape	
		6x10 = 6 in Y East	
		for Grape	
		6x68	6x70
		93	95
		7x18	7x20
		43	45
		7x57 Extra Y West	
		x69	x71
		93	95
		8x19	8x21
		43	45
		69	71
		93	95
		9x18	9x20
		43	45
		9x71 Inspection	
		South line Hawthorn	
		7.81 = 6 in Y for	
		Hawthorn	
		10x49	10x51

✓ Albatross
North of Hawthorn

✓ Columbia
Street

W	E	W	E
10x78	10x75	10x78	10x75
.98	11x00	1x98	1x00
11x24	11x26	2x23	25
.48	.50	485	50.5
.73	.75	.73	.75
.98	12.00	.99	301
12x23	12x25	3x23	.25
.49	.51	.48	.50
.73	.75	73.5	75.5
.99	13x00	4x00	Impact
13.23	x25	4x00	G
13.43 = 6 in Y west		4x00	
for Joy		4x00	
13.45 = 6 in Y East for		4x00	
Joy Street		4x00	
13.49 End of Pipe		4x00	
in Filtration tank		4x00	
Columbia		4x00	
Columbia		4x00	
South from H St		4x00	
E	W	4x00	
0x48	0x50	4x00	
.735	.755	4x00	
.98	1x00	4x00	
14.22	x24	4x00	
1x30 end of pipe		4x00	
Entered		4x00	

✓ Columbia Street

10

W	E	W	E
7x48	7x50	13x23	13x25
7x75		13x48	50
8x98	8x50	73.5	75.5
.74	.76	.98	14x00
.98	9x00	14x22	x24
9x23	.25	.98	.50
.735	.755	.98	75.5
.73	.75	.98	15x50
.78	10x00	15x25	
11x23	.25	15x47	16x51
.48	.50	.73	.75
.735	.755	.98	17x00
.78	11x00	17x23	.25
11x23	.25	.48	.50
11x50		.73	.75
12x23	12x25	.98	18x00
.48	.50	18x23	x25
.73	.75	.98	.50
.78	13x00	.98	.75

Columbar

W	E	W	E
19x20		25,28.5	25,33.5
0 C		53.5	55.5
19x20		78	81.0
19x20		26,03	26,05
19x20		28	30
19x20		53	55
21x23	21x23.5	26x80	
19x20	30.5	O A	
19x20	19	27x58	27x60
19x20	19	83	85
22x25	22x25.5	28,08	28x10
19x20	50	33	35
19x20	75	59	61
19x20	100	83.5	85.5
0 B		29,09	29x11
19x20	50	33	35
21,03	25	58	60
19x20	30	84	86
19x20	55	30x09	30x11
19x20	80	23	25
25,03	25,05		

Entered May 25th 1885

end of pipe 25
at back of line of building on ash

11
Columbia north of Ash

W	E	W	E
0.42	0.44	5.44	5.46
.65	.67	.70	.72
.89	.91	.94.5	.96.5
1.15	1.17	6x2.05	6x2.25
.39.5	.41.5	44.5	46.5
.65	.67	69.5	71.5
.89.5	.91.5	95	97
2.15	2.17	7.22	Inspection
.40	.42	0	South line Cedar
.64	.66	7.40	6m S for cedar
.92	.94	7.99	8x01
3.14	3.16	8x24	8x26
3x42	Inspection	.50	.52
0	Sotom Beach	8.74.5	8.76.5
3x60.5	6m Year for Beach	99	9x01
4.19.5	4.21.5	9x25	9x27
.44.5	.46.5	.50	.52
.70.5	.72.5	.74	.76
.95	.97	.99	10x01
5.19.5	5.21.5	10x24.5	10x26.5
		49.5	51.5

Columbia Sta

no of ash

W	E	W	E
10745	10765		1482
1102	Inspection	1506	1508
0	So. line date	305	325
11x19	6 in Y east	56	58
	for Date	805	825
1180	1182 ^{Entered}	1605	1607
1205	1207	38	38
295	315	555	575
54	56	81	83
80	82	1706	6 in Sport
13045	13065		Fir. Street east
295	315	1708	end of pipe
555	575		in Flush tank
795	815		Entered
14x08	Inspection		north of Grape
0	of Elm		to 304. sta.
1402		W	E
1421	6 in. Y. for Elm East	041	043
147		66	68
715		90	92
80		116	118

Columbia Sta

12

North of Grape

W	E	W	E
1x41	1x43	6x70	6x72
65	67	94	96
90	92	7x16	6 in Y west from
2x16	2x18	7x18	6 in Y East Joy
40	42	7x22	end of pipe
65	67		in Flush tank
91	93		Entered
315	317		Columbia Street
8x43	Inspection		South of Grape
	Hawthorn Street	W	E
362	6 in Y east from	039	041
	Hawthorn Sta	65	67
4x20	4x22	89	91
46	48	114	116
70	72	39	41
95	97	64	66
521	523	90	92
45	47	213	215
71	73	39	41
95	97	64	66
621	6x23	88	90
46	48	314	316

Entered
 8x33 6 in Y east from
 8x35 6 in Y east from
 8x40 end of pipe

Arctic Street

W	E	W	E
Beyond Station 1x0		5x98	6x00
1x0	1x02		
.285	.255	6x23	x25
.48	.50	x48	x50
.78	.75	x78	x75
.975	.995	.98	7x00
2x28	2x25	7x22.5	x24.5
.485	.505	.48	.50
.73	.75	7x75	South Side Pick
.98	3x00	7x94.5	6 in y
3x28	x25	turned East for H Str	
.48	.50	8x48	8x50
.735	.755	.725	.745
4x00	Inspection	.98	9x00
South side of G		9.23	9.25
420	6 in y turned	.48	.50
east for G Street		.735	.750
473	4.75	.98	10x00
.98	5x00	10x23	x25
5x28	x25	.48	.50
.485	.505	.73	.75
.73	.75	.98	11x00

Arctic Street

W	E	W	E
11x23	11x25	16x98	17x00
11x50	Inspection	17x22.5	.24.5
11x69	6 in y turned	.47	.49
east for E Street		.73	.75
12x23	12x25	.98	18.00
.48	.50	18.22.5	.24.5
.735	.755	.485	.505
.98	13x00	.725	.745
13x23	x25	.98	19x00
.475	.495	19.20	Inspection
.73	.75	0	C Street
.98	14x00	19.38.5	6 in y East
14x23	x25	for	C Street
.48	.50	19.97	19.99
.725	.745	20x23	20x25
.98	15x00	.475	.495
15x25	Inspection	.72	.74
15x43	6 in y for	.975	.99.5
II Street east		21.21.5	21.25.5
16x48	16x50	.49	.51
.72	.74	.73	.75
		.97	.99

Arctic Street

W	E		W	E
22x23	22x25		27x58	27x60
.47	.49		.835	.855
.735	.755		28.08	28.10
2300	Inspector		.33	.35
○	B Street		.58	.60
23x18	6 in y for		.83	.85
	B Street east			
2876	2878.5		29.08	29.10
24.03	24.05		.33	.35
.27	.29		.575	.595
.53	.55		.82	.84
.77	.79		30x08.5	30x10.5
25.03	25.05		.33	.35
28	30		30x60	end of Pipe
54	56		South of Ash	Street
78	80		Entered May 23	1888
26.02	26.04		North Side of	Ash St
29	31		0x41	0x43
.53	.55		.64	.66
26.80	a street		.90.5	.92.5
○	Inspector		1x15	1x17
26x98	6 in y for		.40	.42
	a st east			

Arctic

14

W	E		W	E
1x64.5	1x66.5		6x94.5	6x96.5
.875	.915		7x22	Inspector
2x14	2x16		Cedar	Street
.39	.41		○	
.65	.67		7x39	6 in y for Cedar
.89.5	.91.5		8x00.5	8x02.5
3x15	3x17		.24.5	.26.5
3x42	Inspector		.50	.52
○	Beach		.74.5	.76.5
3x60	6 in y for		9x00	9x02
Beach	St east.		.24	.26
4x20	4x22		.50	.52
.45.5	.47.5		.74	.76
.72	.74		10x00	10x02
.94.5	.96.5		.24	.26
5x20.5	5x22.5		.50	.52
.44.5	.46.5		.74	.76
.70.5	.72.5		11x02	Inspector
.95	.97		○	Water Street
6x20.5	6x22.5		11x20	6 in y east
.46	.47			for Water street
.68.5	.70.5		11x79.5	11x81.5

Arctic

W	E	W	E
12x04	12x06	1x15	1x17
30	32	39	41
54	56	65	67
79	81	89	91
13x04.5	13x06.5	2x15	2x17
29	31	40.5	42.5
55	57	65	67
79	81	89.5	91.5
14x05	14x07	3x15	3x17
29	31	3x41	Filush Tank
55	57	North side of Fin Str.	
79.5	81.5	Entrance	
15x04	15x06	From North line of	Grape Street
15x32	end of pipe		
S. Line of Fin Street		0x40	0x42
Filush Tank		64.5	66.5
Entrance		90	92
From So. line of		1x14	1x16
Grape Street		40	42
0x42	0x44	64	66
65	67	90	92
90	92		

"Juniper" + Arctic

15

W	E	W	E
2x14.5	2x16.5	32x80	32x82
40	42	33x03	33x05
64.5	66.5	26.5	28.5
89	91	51	53
3x14	3x16	76	78
3x41	South Side of	34x07	34x09
Hawthorn St		24	26
Filush Tank		51	53
Entrance		77	79
on Juniper from		35x02	35x04
California St to		26.5	28.5
Arctic		52	54
North South		35x79	Inspection
30x78	30x80	0	North side of
31x04	31x06	Grape St.	
29	31	35x97	6 in Y
53	55	east for 204 St	
79	81	36x57	36x59
32x03	32x05	81.5	83.5
x59	6 in Y east for	37x07	37x09
Juniper St		31.5	33.5
32x76	Inspection South		
0	side of Juniper		
	St		

Arctic

16

W

E

W

E

87x57 87x59

71 73

88.07 88.09

51 35

56 58

75 77

89x075 89.095

29 31

89x84 25 ft back

of Pop line or
Hawthorn st
flunk tankEntered

✓
Ash Street
From Atlantic

No SO

Began at Station 0

0x19 0x21

244 246

1x20 1x22 Center of RR

2x37 10x85 for Calif north

3x95.3 3x97.3

4x97 y for genetic sta north

7x72 Manhole west line

7x85 y north for India Sta

of India Street

10x65 6 in y north

from Columbia

12x82 end of 10 in

pipe on Ash Street

13x32 Inspection

0 West line of State

13x40 6 in y north for "

13.945 13.965

14.19 14.21

45 47

695 715

95 97

15.195 15.215

455 475

70 72

15x95 end of
Pipe (8 in) in
Manhole
West line of Union

Entered

June 7

Columbia
South from
Quimper

17

W ?

0 88 0x40

64 66

89 91

1 14 1 16

39 41

64 66

88 90

2x14 2x16

40 42

64 66

89 91

3.14 3.16

3.35 - 6 in y west

3.41 end of Pipe

for Filash tank

Entered

California
North of H Str

20

W	E	W	E
0x53	0x55	5x78	5x80
78.5	80.5	6x02	6x04
1x04	1.06	28	30
29	31	52.5	54.5
53.5	55.5	78	80
79.5	81.5	7x02.5	7x04.5
204	206	7x30 Inspector	
28.5	30.5	So line of H Str.	
54.5	56.5	7x48 - Gu Y East	
79	81	for H Street	
3.03	3.05	8x03	8x05
29	31	28.5	30.5
355 Inspector so line		52.5	54.5
H Street		77	79
372 - Gu Y East for H Str		9.03	9.05
4.27	4.29	27	29
52.5	54.5	53	55
78.	80	76	78
5.03	5.05	10.03	10.05
28	30	28	30
52.	54.	53	55
		77	79

✓ California
North of H St

W	E	W	E
11.05	Inspection so	16.78	16.80
	line of E Street	17.025	17.045
11.22	6 in Y East for	285	305
	E Street	525	545
11.785	11.805	79	81
12.025	12.045	18.03	18.05
.27	.29	.27	.29
.53	.55	.53	.55
.78	.80	1872	Inspection South
13.025	13.045		line of Q St
28	30	1890	6 in Y East
53	55	19.495	19.515
765	785	73	75
14.03	14.05	20.00	20.02
27	29	26	28
53	55	50	52
14.80	Inspection so	74	76
	line of D Street	21.00	21.02
14.985	6 in Y East for D	24	26
16.02	16.04	50	52
.28	.30	76	78
.525	.545	22.00	22.02

✓ California
North of H

21

W	E	W	E
22.245	22.265	28.095	28.115
22.52	Inspection so line B	35.5	37.5
22.70	6 in Y East for B	60	62
23.29	23.31	85	87
55	57	29.095	29.115
78	80	84	86
24.05	24.07	60.5	62.5
29.5	31.5	85.5	87.5
55	57	30.105	end of
79.5	81.5		Pipe so line C
25.055	25.075	<u>Entered June 12th</u>	
30	32		
54	56		
80	82		
26.04	26.06		
26.82	Inspection		
	South Line of a St		
26.50	6 in Y East for C		
27.09	27.11		
.35	.37		
.59	.61		
.855	.875		

California
North of H

8 inch

California
North of Ash

✓
22

W	E	W	E
Began at			
Station 0		5x45	5x47
0x41	0x45	.69.5	.71.5
65	67	.94.5	.96.5
89.5	91.5	6.19.5	6.21.5
1x14	1x16	.44.5	.46.5
40	42	.69.5	.71.5
64	66	.94.5	.96.5
.89.5	.91.5	7x20 Inspector	
2x14	2x16	so line Cedar	
.89.5	41.5	8x00	8x02
65	67	.25	.27
89.5	91.5	.50	.52
3x14	3x16	.74	.76
3x42	Inspector	9x00	9x02
0 so. line of Beach		.25	.27
3x62	6 in Y East of Beach	.49.5	.51.5
4x20	4x22	.74.5	.76.5
.44	.46	.99.5	10.01.5
.70	.72	10x25	10x27
.94.5	.96.5	.49.5	.51.5
5x20	5x22	.74	.76

✓ California
North of Oak

1429
1180
249

W	E	W	E	€
11X05 Inspection		16.07	16.09	
South line Date		.32	.34	
11X23 6 in V east		.56.5	.58.5	
for date		.81.5	.83.5	
11,82.5	11,84.5	17,06.5	17,08.5	
12.08	12.10	.31	.33	
.33	.35	.57	.59	
.58	.60	.81.5	.83.5	
.82.5	.84.5	18X11 Inspector l		
13,08.5	13,10.5	o So line of Geopie		
.33	.35	18X30 8 in V for		
.58	.60	Geopie, east.		
.82	.84	18731 Redmen to land		
14.08	14.10	18.89	18.91	hip
14.29 Inspection South		19.14.5	19.16.5	
line First Street		.38	.40	
14.47 6 in V east for		.63.5	.65.5	
for sta,		.88.5	.90.5	
15.06	15.08	20.13.5	20.15.5	
.32	.34	.38.5	.40.5	
.57	.59	.64	.66	
.82.5	.84.5	.89	.91	

California

23

W	E	W	E
21.14	21.16	26.11 Inspector	
.39	.41	o Joy Street	
.63.5	.65.5	26.48.5	26.50.5
21.91 Inspection south		.73	.75
o line of Hawthorn		.99	27.01
22.09 6 in V East		27.22	27.24
for Hawthorn		.49	.51
22.68.5	22.70.5	.73.5	.75.5
.93	.95	.98	28.00
23.19	23.21	28X.24	28X.26
.43.5	.45.5	.48	.50
.68.5	.70.5	.73	.75
.93	.95	.99	29.01
24.18	24.20	29X16 Inspector	
.42	.44	(35) So line of Geopie	
.68.5	.70.5	Inspector	
.94	.96	North South	
25.19	25.21	30.23.5	30.25.5
.43.5	.45.5	30.37 = 30.78	
25.89 6 in V east		on Geopie St	
for Joy Street		<u>Entered</u>	

State Street

W	E	W	E
Began State			
128.5	125.5	6x73.5	6x75.5
48	50	98	7x00
73.5	75.5	7x23	7x25
98	2x00	48	50
2x22.5	2x24.5	7x73	Inspector
48	50	○ South lin F.	
72.5	74.5	8x49	8x51
97	99	73	75
324	326	98.5	9x00.5
48	50	9.23	9.25
73	75	49	51
400	Inspector	73	75
○ South lin G.		98	10.00
473.5	475.5	10x23	x25
97.5	99.5	48	50
328.5	525.5	73	75
48	50	98	11x00
73.5	75.5	11x23	x25
98	6x00	x50	Inspector
6x23	6x25	○ South side of E	
48	50	12x24	12x26

State Street 25

W	E	W	E
12x48	12x50	18x48	18x50
73	75	73	75
98	13x00	98	19x00
13x23	x25	19x20	Inspector
48	50	○ South side C #	
73	75	19x98.5	20x00.5
98	14x00	20.23	.25
14x23	x25	49	51
47.5	49.5	73	75
73	75	98	21.00
98	15.00	21x24	x26
15x25	Inspector	48.5	50.5
○ South lin II Str		73	75
16x48	16x50	98	22.00
73	75	22x23	x25
98	17x00	48.5	.50
17x23	x25	73	75
48	50	23x00	Inspector
74	76	○ South lin B.	
98	18x00	23x78	23x80
18x23	x25	24.02	24.04

State

W	E	W	E
24x28	24x30	29x33	29x35
58	55	58	60
78	80	29x71, 6 in Y east	
25.03	25.09	29x85 end of Pipe	
.28	.30	Entered May 15 th 1888	
53	55	75 feet south of S 2 Ash	
78	80	<u>Entered</u>	
26.025	26.045	State Street	
28	30	North of Ash	
52	54	0x40	0x42
26.78	Inspection	.64	.66
0.2 ft Back of line of a Street		.89	.91
27.58	27.60	1x15	1x17
.88	.85	39	41
28.08	28.10	65	67
.33	.35	89	91
59	61	2x15	2x17
83	85	40	42
29.075	29.095	64	66
		90	92

State Street

W	E	W	E
3x15	3x17	8x99	8x01
3x42	Inspect So line Beach	9x25	9x27
3x60	6 in Y East for Beach	49	51
4x19	4x21	74	76
44	46	99	10.01
69	71	10.25	27
94	96	49	51
5x20	5x22	74	76
44	46	11x00	Inspection
69	71	So line State St	
94	96	11x18-6 in Y east for State	
6x19	6x21	11.78	11.80
44	46	12.02	12.04
69	71	28	30
95	97	52	54
7x22	Inspect. so line Cedar	78	80
7x42	6 in Y East for Cedar	13.02	13.04
8x00	8x02	27	29
24	26	52	54
50	52	77	79
74	76	14.02	14.04
		27	29

State Street

W	E	W	E
1449 Inspector		1997	1999
So line of Elm Street		2022	2024
1468 6 in Y East for Elm		48	50
1526	1528	72	74
51	53	97	99
76	78	2122	2124
1602	1604	47	49
26	28	72	74
51	53	2200 Inspector	
76	78	So line of Grape	
1701	1703	2218 6 in Y East	
27	29	2277	2279
51	53	2301	2303
76	78	27	29
1801	1803	52	54
1820 Inspector		78	80
So line Fir Street		2403	2405
1838 6 in Y East		27	29
1897	1899	53	55
1922	1924	78	80
47	49	2503	2505
73	75	28	30

State Street
North of Ash

W	E
2553	2555
2574-6 in Y West for	
276-6 in Y East "	
Hawthorn Street	
25x80 end of pipe	
in Flunk	
Elm	
State Street South	
from Juniper	
039	041
64	66
89	91
114	116
39	41
63	65
89	91
214	216
40	42
64	66
89	91
314	316

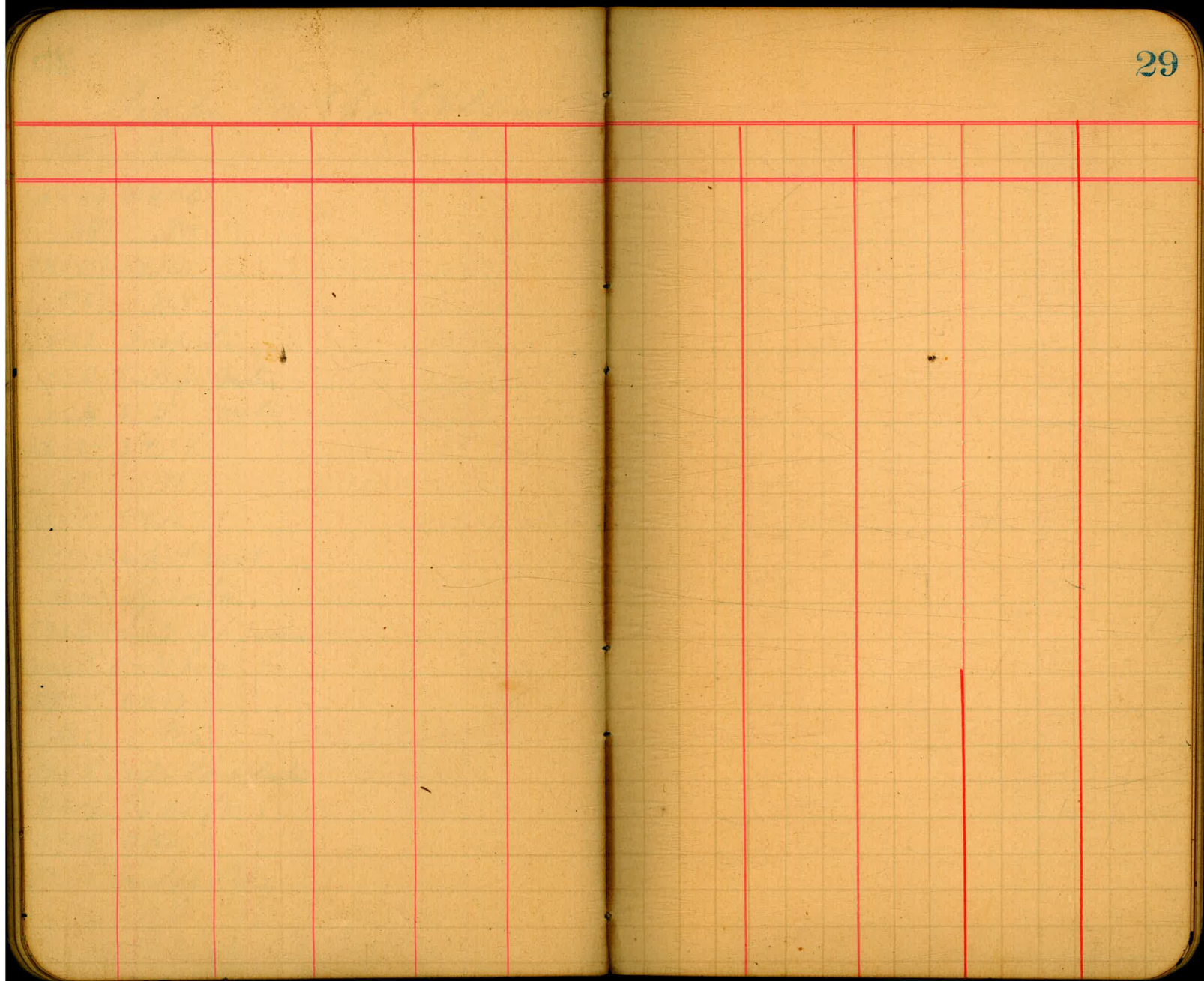
State St
South from Juniper

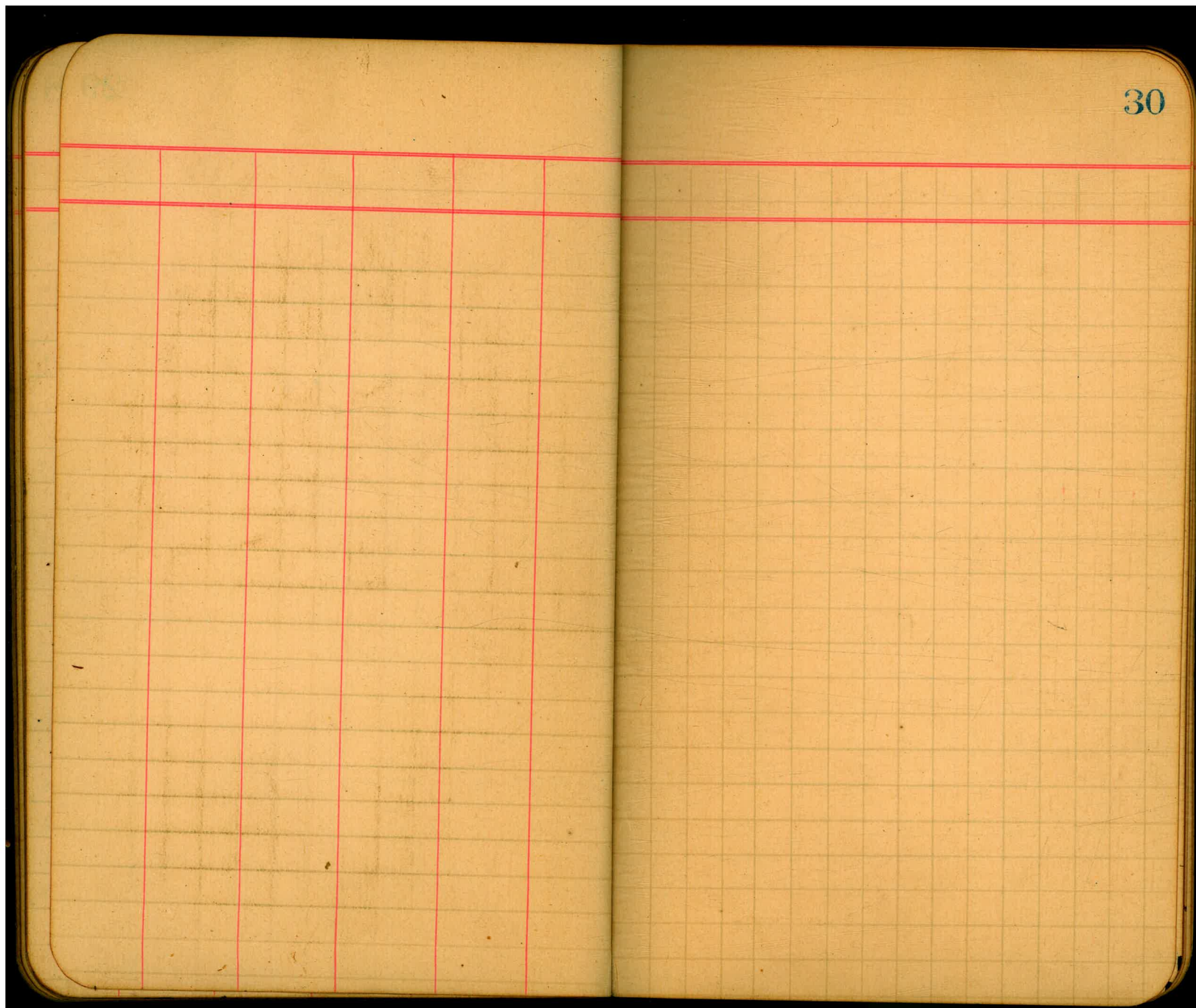
W	E
342 Inspector	
No line of Joy	
5x60 6 in Y East	
419	421
44	46
69	71
94	96
(515) East Y	
east	
519	
544	546
70	72
94	96
619	621
44	46
69	71
94	96
7x14 6 in Y West	
7x16-6 in Y East	
for Hawthorn	
722 end of pipe	
for Flunk	
Enter	

Wooden Joy began at 1x67 and ended at 1x79

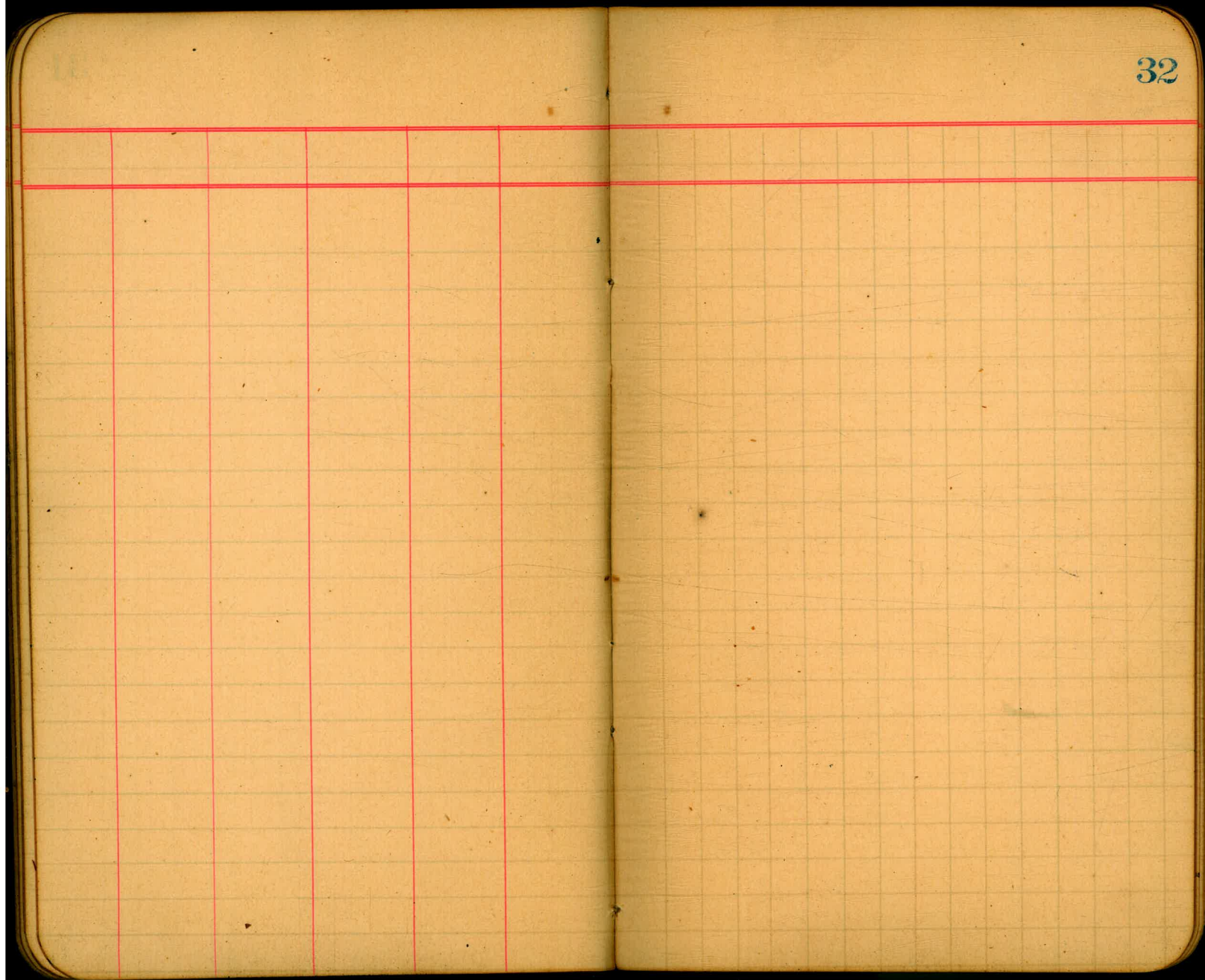
✓
Grape East from California

No	So
0x64	0x66
.88	.90
1x14.5	1x16.5
.89.5	.91.5
2x42	Inspector
x50	6" Y for Austria
x54	6" Y " Austria
3x15	3x17
39	41
4x14	4x16
5x17	Inspector west
	land of India
5x33	6" Y for India
5x85	6" Y no " "
6x15	6x17
.89.5	.91.5
7x92	Inspector from Columbia
8x07	Y no for
8x09	Y so " "
8x10	encl of Paper
Entered	

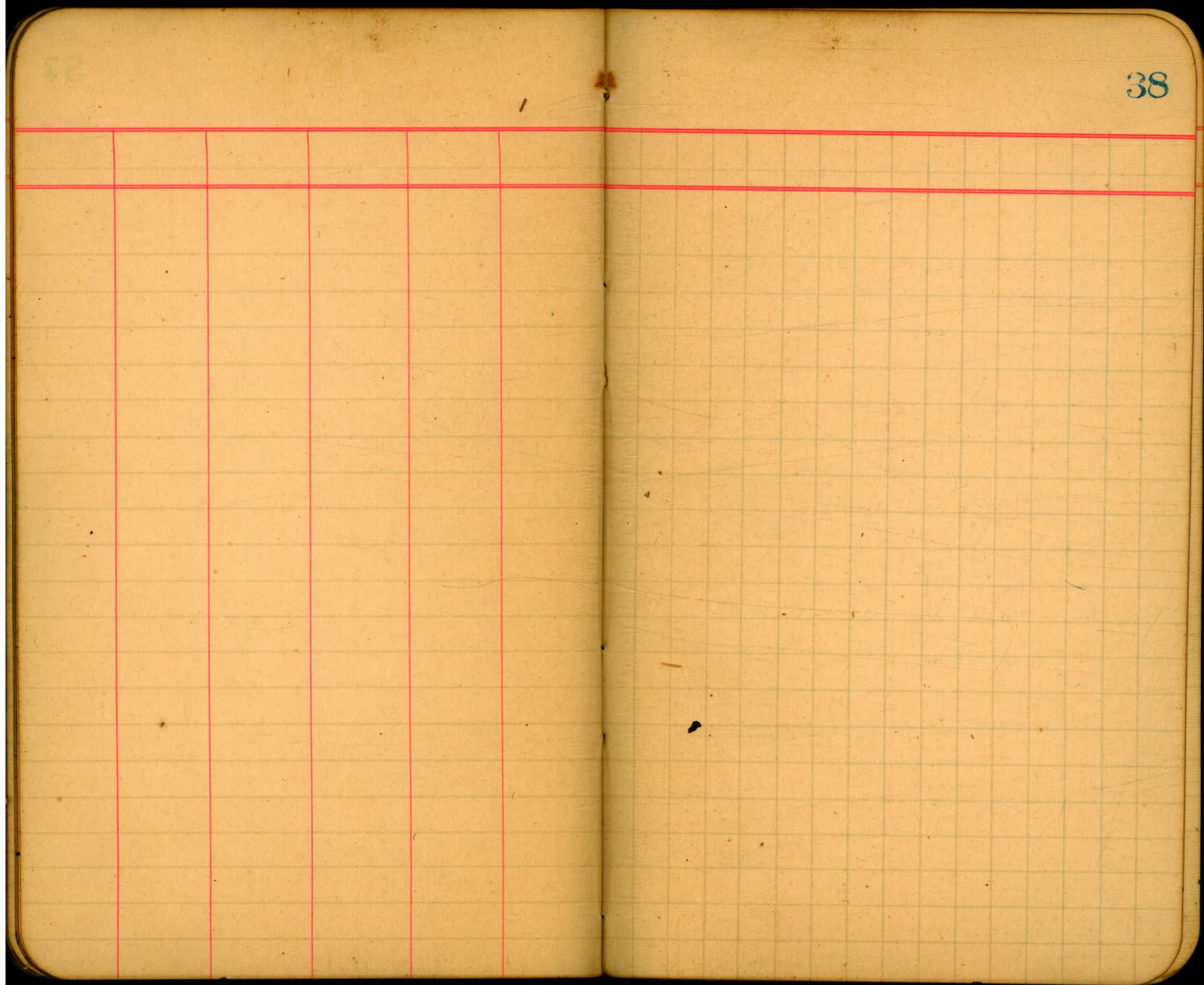




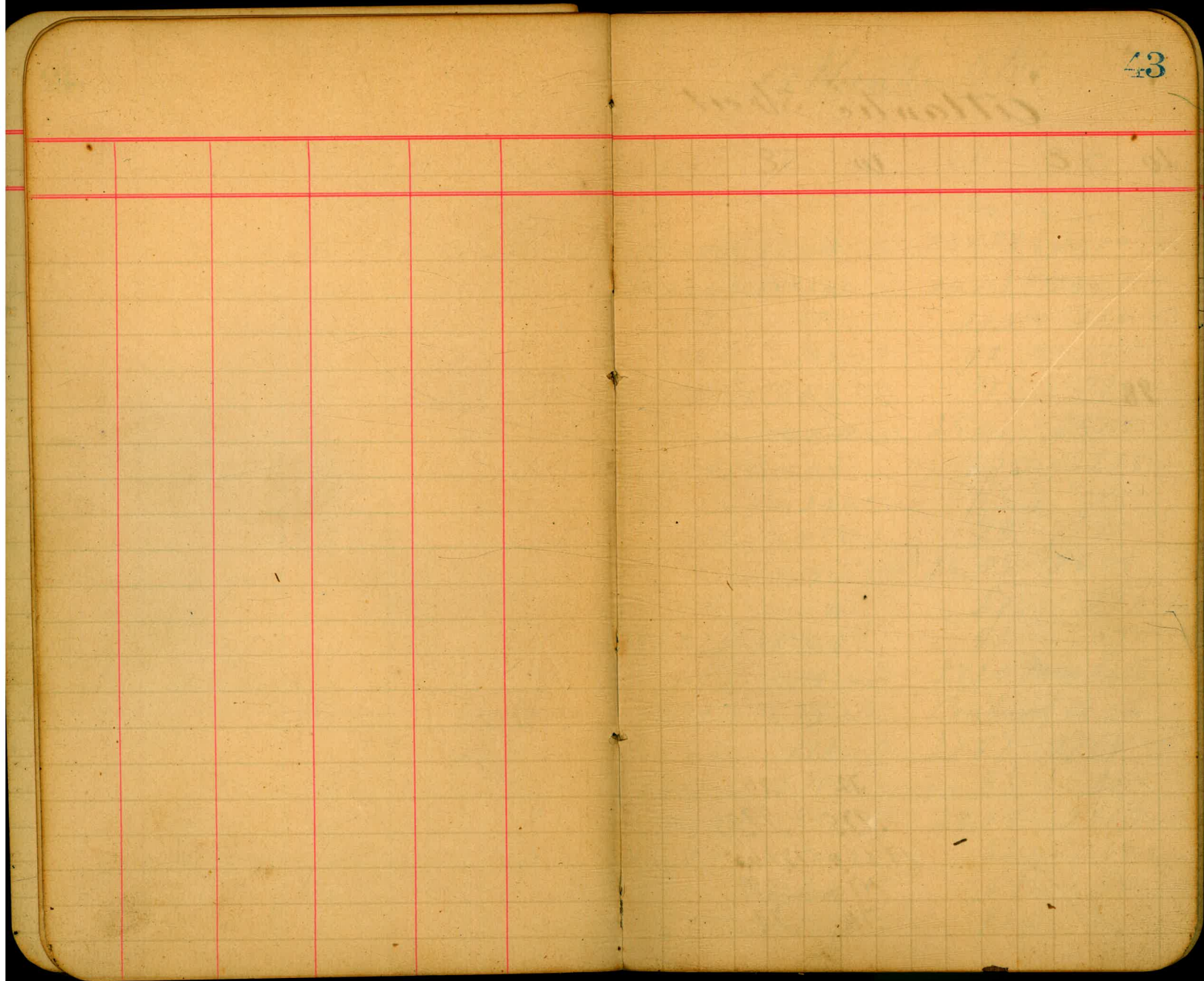




The image shows an open notebook with two pages. The pages are a light tan or yellowish color. The left page is ruled with a grid of light green lines. There are five vertical red lines drawn across the page, creating six columns of varying widths. The right page is also ruled with a grid of light green lines. In the top right corner of the right page, the number '33' is printed in a dark blue or black font. The notebook is placed on a white surface, and the background is dark.



41



✓

Atlantic Street

Atlantic Str.

44

W	E	W	E	W	E	W	E
Ma 1	142 H4 Atlantic						
1x0	1402	10x48	10x50	17x98	18.00	23x78	2380
1x41	1x49	10x95	11x00	18x22.5	18x24.5	24.03	24.05
2x15	2x17	11x48	x50	.47	.49	.27.5	.29.5
.48	.50	Manhole		.72.5	.74.5	.52	.54
98	3x00	11x87.5	E Street	98	19.00	.77.5	.79.5
3x48	3x50	12x23	12x25	19x60	Manhole	25.03	25.05
.98	4x00	.72	.74	19.98	20x00	.27.5	.29.5
4x62		13x23	.25	20x23	.25	.53	.55
Manhole	9 Street	.73	.75	.47.5	.49.5	.78	.80
4x77	x79	14x23	14x25	.72	.74	26.03	26.05
5x22	5x24	.73	.75	.98	21.00	.27	.29
.73	.75	98	15x20	21.22.5	21.24.5	.53	.55
6x22	6x24	Manhole		.47	.49	27.20	Manhole
.73	.75	15x87.5	on 11 St	.73	.75	Center of A St	
7.23	7.25	16.48	16.50	.97.5	.99.5	27.57	27.59
.73	.75	.72	.74	22.17	22.19	.83	.85
8x16.5	8x18.5	.97.5	.99.5	.47.5	.49.5	28.08	28.10
98	9x20	17.22.5	17.24.5	.72.5	.74.5	.32	.34
9x48	x50	.47	.49	23.20	Manhole	.58	.60
98	10x00	.71	.73	B Street	20 S. of center	82.5	84.5

Atlantic
Street

45

W E

29.08 29.10

.32 .34

.58 .60

.825 .845

30.07 30.09

.33 .35

.55 .57

.70

3118 Manhole

Connecting 10 inch
pipe at Arch
Street

Entered June 7th 88

31 11
31 18
31 11
2.02

Hawthorn } India South
 East from 1st St } from Grape 46

So	No	E	W
038	040		
65	67		
90	92	0x38	0x40
114	16	64	66
39	41	89	91
64	66	1.15	1.17
89	91	39.5	81.5
214	2x16	64	66
236-G in Y South for 2 ^o)		88	90
2x38-G in Y North for Str)		2,145	2,165
3x46	3x48	40	42
496 pt of C and		64	66
of line on Hawthorn St		88	90

Entered

3x15 3x17
 3x43 end of
 Paper for Filwhitak
 no line of
 Five Street

Entered

2.42 west line 2^d
 3.22 East "

India St

W	E	W	E	W	E
0+94	1+00				
1x26	28	75.5	75.5	12x24	26
49	51	98.5	7x0.5	48	50
74	76	7x23.5	25.5	72	74
97	99	49	51	98	13x00
2x22	24	7x75		15x23	25
18.5	50.5	8x48	50	47	49
73.5	75.5	73	75	73	75
12.5	5x0.5	98	9x0	98	14x00
23.5	25.5	9.24	26	14x22	24
48	50	48.5	50.5	47	49
73.5	75.5	73	75	73	75
4x00		98	10x00	98	15x00
73.5	75.5	10x23	25	15x25	
98	5x00	49	51	0	11
5x23	25	73	75	16x49	51
49	51	99.5	11x0.5	73	75
73	75	11x23.5	26.5	98	19.00
98	5x00	11x50		17x23.5	25.5
6x24	26	South side of		48	50
49	51	E Street		72	74

India St

W	E	W	E
17x98	18x00	23x78	25x80
18x22	24	24x03	24.05
46	48	27	29
73	75	53	55
97	98	77	79
19.20		25.05	25.05
0	0	27.5	27.5
19.99	20x01	53	55
20x23	25	77.5	79.5
48	50	26.03	26.05
72	74	28	30
98	100	52.5	54.5
11x23	25	26x80	
48	50	Inspection	
72	74	27.5	27.5
98	100	28.3	28.5
22x23	25	28x08	28x10
48	50	33	35
74	76	58	60
23x00		83.5	84.5
0	0	29.05	29.10
Inspection		33	35

India north
 India India } of Ash

W	E	W	E
		Began at Stator. O	
29.58	29.60	0x.50.5	0x.58.5
.83	.85	80	82
30x.08	30x.10	1x.04.5	1x.06.5
30.35		.29.5	.31.3
30.40		.55	.57
30.45		.79.5	.81.8
30.46	30.48	2x.05	2x.07
Entered May 24 th		.30	.32
<u>Entered</u>		.54	.56
		.80.5	.82.5
		3.04.5	3.06.5
		.29	.31
		3x.57	Inspection
		O So line Beach	
		3.75	6 in Y east of Beach
		4.35	4.87
		.59.5	.61.5
		.85	.87
		5.09.5	5.11.5
		35	37

W	E	W	E
5x.60	5x.62		
x.84.5	86.5		
6x.07.5	6x.11.5	Entered May 24 th	
.35.3	.37.5		
.60	.62		
.84.5	.86.5		
7x.10.5	7x.12.5		
7x.37	Inspection		
So line of Cedar str			
7x.55	6 in Y east of Cedar Street		
8x.14.5	8x.16.5		
.39	.41		
.65	.67		
.89.5	.91.3		
9.15	9.17		
.39.5	.41.3		
.64	.66		
.90	.92		
10x.14.5	10x.16.5		
.40.5	.42.5		
.64	.66		
		10x.90	10x.92
		11x.17	Inspection
		O So line of date	
		11x.35	6 in Y east of date
		11x.95	11x.97
		12x.19.5	12x.21.5
		.45	.47
		.69.5	.71.5
		.94	.96
		13.19.5	13.21.5
		.45	.47
		.69.5	.71.5
		.95.5	.97.5
		14.19.5	14.21.5
		.45	.47
		.69.5	.71.5
		.95	.97
		15.20	15.22
		.45.5	.47.5
		.69.5	.71.5
		.94	.96

India
North of Grape } North from Grape

W	E	W	E
16x20	6in Y for Pin		
16x22	end of East	0.38	0.40
	pipe on India north	.65	.67
	of Ark	.89.5	.91.5
	<u>Entered</u>	1.14.5	1.16.5
	India: South	40	42
	from Grape	65	67
0.58	0.40	89	91
64	66	2.15	2.17
89	91	3.95	4.15
1x15	1x17	65	67
39.5	41.5	90	92
.64	.66	3.14	3.16
.88	.90	3.42	Inspector
2.14.5	2.16.5	So lin Hawthorn	
40	42	3.60	6in Y East,
64	66	4.18	4.20
88	90	45	47
3.15	3.17	.69.5	.71.5
3x43	end of pipe	.95	.97
	no line for	5.19.5	5.21.5
	flank tank		
	<u>Entered</u>		

India } Juniper
North of Grape } from India

W	E	North	South
5x45	5x47	0x11	0x13
695	715	36	38
95	97	59	61
6.19.5	6.21.5	86	88
45	47	1x10.5	1x12.5
70	72	36.5	38.5
945	96.5	16.3	Inspector
7.23	Inspector	West Line Columbia	
South lin	gray steel	178	6in Y for
7.40	6in Y east	Columbia	
8.00.5	8.02.5	180	6in Y
.255	.275	South for Columbia	
51	53	2.36	2.38
755	775	61	63
9.01.5	9.03.5	85.5	87.5
26	28	3.11	3.13
50	52	36	38
76	78	60.5	62.5
10.00.5	10.02.5	86.5	88.5
25	27	4.11	4.13
51	53	4.38	Inspector
10.68	Inspector	West line of State	
So lin	Juniper	452	6in Y for
11.50	11.52	State South	
70	78	454	6in Y North
11.92	end of pipe	4.73	4.75
	on India	5.11	5.13
	<u>Entered</u> India	35.5	37.5
11.92	0 on Juniper	61	63
		85.5	87.5

Juniper
from India

W 9

6x11 6 13
355 325
61 68

6.74 Inspector at
Pt of C 35 ft west
of west line of Union
749 6 in Y East from Juniper
774 7.76 Pt of T

Entered

Union South
from Juniper

E W

037 039
62 64
88 90

7.78

745

29.16
26.5
37.81
26.5
40
26.11

7+75 = 25' South
of South line of Juniper
on Union

3710
1781
9431
10210
9431
1780

TRAVERSE TABLE FOR TRANSIT BOOK,
From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		¼ DEGREE.		¼ 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	88
1	99.94	3.49	99.98	2.18	99.97	2.62	99.95	3.05	87
2	99.86	5.23	99.92	3.93	99.91	4.36	99.88	4.80	86
3	99.86	6.98	99.84	5.67	99.81	6.10	99.79	6.54	85
4	99.76	8.72	99.73	7.41	99.69	7.85	99.66	8.28	84
5	99.62	10.45	99.58	9.15	99.54	9.58	99.50	10.02	83
6	99.45	12.19	99.41	10.89	99.36	11.32	99.31	11.75	82
7	99.25	13.92	99.20	12.62	99.14	13.05	99.09	13.49	81
8	99.03	15.64	98.97	14.35	98.90	14.78	98.84	15.21	80
9	98.77	17.36	98.70	16.07	98.63	16.50	98.56	16.93	79
10	98.48	19.08	98.40	17.79	98.33	18.22	98.25	18.65	78
11	98.16	20.79	98.08	19.51	97.99	19.94	97.90	20.36	77
12	97.81	22.50	97.72	21.22	97.63	21.64	97.53	22.07	76
13	97.44	24.19	97.34	22.92	97.24	23.34	97.13	23.77	75
14	97.03	25.88	96.92	24.62	96.81	25.04	96.70	25.46	74
15	96.59	27.56	96.48	26.30	96.36	26.72	96.25	27.14	73
16	96.13	29.24	96.00	27.98	95.88	28.40	95.76	28.82	72
17	95.63	30.90	95.50	29.65	95.37	30.07	95.24	30.49	71
18	95.11	32.56	94.97	31.32	94.33	31.73	94.69	32.14	70
19	94.55	34.20	94.41	32.97	94.26	33.38	94.12	33.79	69
20	93.97	35.84	93.82	34.61	93.67	35.02	93.51	35.43	68
21	93.36	37.46	93.20	36.24	93.04	36.65	92.88	37.06	67
22	92.72	39.07	92.55	37.86	92.39	38.27	92.22	38.67	66
23	92.05	40.67	91.88	39.47	91.71	39.87	91.53	40.27	65
24	91.35	42.26	91.18	41.07	91.00	41.47	90.81	41.87	64
25	90.63	43.84	90.45	42.66	90.26	43.05	90.07	43.44	63
26	89.88	45.40	89.69	44.23	89.49	44.62	89.30	45.01	62
27	89.10	46.95	88.90	45.79	88.70	46.17	88.50	46.56	61
28	88.29	48.48	88.09	47.33	87.88	47.72	87.67	48.10	60
29	87.46	49.99	87.25	48.86	87.04	49.24	86.82	49.62	59
30	86.60	51.49	86.38	50.38	86.16	50.75	85.94	51.13	58
31	85.72	52.99	85.49	51.88	85.26	52.25	85.04	52.62	57
32	84.80	54.46	84.57	53.36	84.34	53.73	84.10	54.10	56
33	83.87	55.92	83.63	54.83	83.39	55.19	83.15	55.56	55
34	82.90	57.36	82.66	56.28	82.41	56.64	82.16	57.00	54
35	81.92	58.78	81.66	57.71	81.41	58.07	81.16	58.42	53
36	80.90	60.18	80.64	59.13	80.39	59.48	80.13	59.83	52
37	79.86	61.57	79.60	60.53	79.34	60.88	79.07	61.22	51
38	78.80	62.93	78.53	61.91	78.26	62.25	77.99	62.59	50
39	77.71	64.28	77.44	63.27	77.16	63.61	76.88	63.94	49
40	76.60	65.61	76.32	64.61	76.04	64.94	75.76	65.28	48
41	75.47	66.91	75.18	65.93	74.90	66.26	74.61	66.59	47
42	74.31	68.20	74.02	67.24	73.73	67.56	73.43	67.88	46
43	73.14	69.47	72.84	68.52	72.54	68.84	72.24	69.15	45
44	71.93	70.71	71.63	69.78	71.33	70.09	71.02	70.40	44
45	70.71								43
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		¼ DEGREE.		¼ DEGREE.		

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