

Hubbard Road & Jug Street
BURTON TWP.

LEVEL BOOK

373

KEUFFEL & ESSER CO.

DRAWING MATERIALS AND SURVEYING INSTRUMENTS. NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

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	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

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2 July 31, 1930 P. Parks, R. Hassel
Fair Warm

B.M. 7.08 1143.58 1136.50

1 1137.70

2 1138.90

3 1140.10

4 1141.30

5.72 1149.07 0.23 1143.35

5 1142.50

6 1143.34

7 1144.18

8 1145.02

9 1145.86

10 1146.70

T.P. 1.14 1147.93

Slope Stakes Hubbard Road 3

Spike, E. root of Maple W. side of Burton-Troy

Road in line with N. side of Bauha's house

5.88 6.07 $\frac{F0.2}{21.0}$ 5.18 $\frac{C0.7}{21.0}$

4.68 5.49 $\frac{F0.8}{20.5}$ 4.31 $\frac{C0.4}{20.5}$

3.48 4.14 $\frac{F0.7}{21.0}$ 2.95 $\frac{C0.5}{22.0}$

2.28 1.43 $\frac{C0.9}{21.5}$ 1.18 $\frac{C1.1}{22.0}$

6.57 4.25 $\frac{C0.3}{21.5}$ 5.72 $\frac{C0.9}{22.0}$

5.73 5.82 $\frac{F1.0}{21.0}$ 5.22 $\frac{C0.5}{22.5}$

4.89 5.14 $\frac{F0.3}{20.5}$ 4.88 $\frac{0.0}{21.5}$

4.05 5.06 $\frac{F1.0}{20.0}$ 4.53 $\frac{F0.5}{21.0}$

3.21 4.38 $\frac{F1.2}{20.0}$ 3.86 $\frac{F0.7}{20.5}$

2.37 2.34 $\frac{0.0}{22.0}$ 2.23 $\frac{C0.1}{22.0}$

Slope Hub Rt. sta. 11+00

1158.52

T.P 5.04 1158.22 5.34 1153.18

20 1152.84

21 1152.30

B.M 7.38 1153.84 1153.81

B.M 1.46 1155.27 1153.81

22 1151.60

23 1151.04

24 1151.30

5.38 6.22 $\frac{F0.8}{20.5}$ 5.04 $\frac{C0.3}{19.5}$ 5.92 5.86 $\frac{C0.1}{22.0}$ 5.21 $\frac{C0.7}{20.0}$

R.P. Spike E, side 18" Maple, Left, 21+28

3.67 4.44 $\frac{F0.8}{20.5}$ 2.54 $\frac{C1.1}{23.0}$

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8 Aug 2, 1930 D. Parks R. Hasse)

9

B.M. 2.15 1155.96 1153.81

23 1151.04 4.92 6.12

24 1151.30 4.66 5.51

25 1151.70 4.26 5.35

5.59 1157.47 4.08 1157.88

26 1152.10 5.37 6.53

27 1152.95 4.52 6.60

28 1155.50 1.97 2.73

9.52 1166.94 0.05 1157.42

B.M. 9.44 1157.50

9.44 1166.94 1157.50 record

29 1158.65 8.29 7.21

30 1162.75 4.19 2.07

7.74 1171.52 0.16 1166.78

31 1166.31 5.21 3.51

32 1168.50 3.02 3.73

33 1170.00 1.52 2.57

7.47 1177.99 1.00 1170.52

34 1171.50 6.49 6.91

R.P. spike E. side 18" Maple left R1128

F1.2 C0.1

20.0 4.84 22.0

F0.9 C0.3

22.0 4.33 22.0

F1.1 C0.1

20.0 4.24 21.0

F1.2 C0.6

20.0 4.82 22.0

F2.1 F0.7

19.0 5.21 21.5

F0.8 F0.9

20.0 2.91 20.0

Bent spike, N.W. Root 12" Maple Right Sta 289

C1.1 0.0

23.0 8.28 21.5

C2.1 C2.4

24.0 1.77 24.5

C1.7 C0.1

23.0 5.15 21.5

F0.7 F1.7

20.5 4.68 20.0

F1.1 F2.2

20.0 3.69 18.0

F0.4 F0.9

21.0 7.35 20.0

1177.99

35

1173.00

36

1176.60

T.P.

0.94 1177.03

4.99	4.78	$\frac{C0.2}{22.0}$	4.50	$\frac{C0.5}{22.0}$
1.39	1.46	$\frac{F0.1}{21.5}$	1.45	$\frac{F0.1}{21.0}$

Line stake Lt. Sta 36+00

1189.06

0.28 1177.83 11.51 1177.55

48+50

1173.00

T.P.

8.89 1168.94

4.88 5.43 $\frac{F0.6}{19.0}$ 4.86 $\frac{0.0}{19.0}$ X Large Rock on ϕ sta 48+75

T.P.	1.19	1170.13		1168.94
49				1168.45
49+21				1167.20
49+45				1166.31
49+75				1166.60
50				1166.45
50+50				1169.20
B.M			11.03	1159.10
	11.03	1170.13		1159.10 record
50+75				1171.50
	6.71	1174.99	1.85	1168.28
51+00				1174.00
	12.88	1187.64	0.21	1174.78
	6.95	1194.59	0.02	1187.64
51+50				1179.00
52				1183.67
			2.42	1192.17

Aug. 6 1930 D. Parks
R. Hesse)

X on large rock on ♀				Sta 48+75
				<u>F2.2</u>
1.68	5.51	<u>22.0</u>		3.83 <u>20.5</u>
		<u>F4.5</u>		<u>F7.7</u>
2.93	7.45	<u>23.0</u>		10.66 <u>29.5</u>
		<u>F6.0</u>		<u>F8.0</u>
3.82	9.82	<u>26.5</u>		11.85 <u>33.0</u>
		<u>F8.8</u>		<u>F8.1</u>
3.53	12.37	<u>33.5</u>		11.65 <u>28.0</u>
		<u>F9.3</u>		<u>F8.1</u>
3.68	13.01	<u>35.0</u>		11.81 <u>29.0</u>
		<u>F11.7</u>		<u>F11.6</u>
0.93	12.66	<u>43.0</u>		12.51 <u>34.0</u>
Spike W. root				+ 15" Berch Right, Sta 49+51
				<u>F13.1</u>
7.37	11.77	<u>39.5</u>		12.09 <u>F13.5</u>
		<u>F4.1</u>		<u>F16.3</u>
0.99	5.08	<u>22.0</u>		17.31 <u>39.5</u>
		<u>C6.2</u>		<u>C8.8</u>
15.59	9.41	<u>31.5</u>		6.78 <u>34.0</u>
		<u>C5.0</u>		<u>C8.5</u>
10.92	5.91	<u>32.5</u>		2.42 <u>35.8</u>
Slope hub				Right Sta 52+00

T.P.	8.35	1200.52		1192.17
52+55				1188.13
53				1191.00
54				1195.67
	5.89	1204.41	1.80	1198.72
55				1198.00
B.M.			5.70	1198.91
	5.70	1204.57		1198.87 (correct)
56				1200.00
57				1202.00
	5.63	1208.01	2.19	1202.38
58				1203.57
59				1204.10
	4.71	1209.07	3.65	1204.36
60				1204.20
61				1204.36
62				1204.40
63				1204.50
64				1204.00

Aug. 9, 1930

D. Parks

R. Hassel

Hot 85°

Slope hub Pt. sta. 52+00

					F1.2			C4.2	
12.39	13.58				28.0	8.24		28.0	
					C3.0			C3.4	
9.52	6.50				26.0	6.15		26.5	
					C0.6			C1.2	
4.85	4.21				22.5	3.66		24.0	
					C0.7			0.0	
6.41	5.89				22.5	6.60		21.0	
Spike E. root 15" Oak Lt. sta 55+31									
					F0.1			C0.1	
4.57	4.69				21.5	4.47		21.5	
					F0.9			F0.6	
2.57	3.47				20.0	3.14		20.5	
					F1.2			F1.2	
4.44	5.63				20.5	5.63		20.0	
					F1.2			F0.4	
3.91	5.10				20.0	4.32		20.5	
					C0.1			C0.2	
4.87	4.74				21.0	4.71		22.0	
					F0.6			F0.3	
4.71	5.33				21.0	4.96		22.0	
					F0.4			0.0	
4.67	5.03				21.0	4.69		22.0	
					F0.3			0.0	
4.57	4.83				20.5	4.55		21.0	
					C0.3			C0.7	
5.07	4.81				21.5	4.34		23.0	

1209.07

3.70 1208.91 4.36 1204.71

B.M.

4.79 1203.62

1203.69 record

Spike N. root 36" Chestnut 150' E of Jug St,
 25' south of Hubbard Rd, E of intersection

B. M. 0.39 1198.38 1197.99

39+75 3.19 1193.41 8.16 1190.22

B. M. 4.50 1158.31 1153.81

18+56 1149.23

1150.29

4.50 1158.31 1153.81

22+76 1147.53

1148.59

Aug. 22, 1930

D. Parks
R. L. Hassel

23

cloudy.

R. P. Spike N.W. side 24" Maple Rt. sta. 44

1184.32 9.09 8.09 C1'0" stake 30' Lt.

1185.20 8.21 6.71 C1'6" stake 30' Rt.

Sept. 8, 1930

D. Parks
E. Parks
T. Snyder

R. P. spike, E. side 18" Maple Lt. sta. 21+28

9.08 6.58 C2'6" stake 30' Lt.

8.02 5.52 C2'6" stake 30' Rt.

10.78 7.28 C3'0" stake 30' Lt.

9.72 5.72 C4'0" stake 30' Rt.

24

B.M. 7.0P 1143.58 1136.50

1 1137.70

2 1138.90

3 1140.10

4 1141.30

5 1142.50

6.59 1149.09 1.08 1142.50

6 1143.34

7 1144.18

8 1145.02

9 1145.86

10 1146.70

5.93 1152.61 2.41 1146.68

11 1147.45

12 1148.20

13 1148.80

14 1149.40

B.M. 4.73 1147.88

4.73 1152.58 1147.85 record

Sept. 11, 1930

Fair Warm 800

D. Parks
R. Hassel
T. Snyder
E. Parks

25

Spike, E. root of Maple W. side Burton-Troy Rd
in line with N. side of Boyha's house

5.88

4.48

3.48

2.28

1.08

5.75

4.91

4.07

3.23

2.39

5.16

4.71

3.81

3.21

Bent spike, S.W. root 30" Maple Lt. St. 1216

1152.58

15

1150.00

2.58

6.82

1154.81

2.59

1149.99

14

1150.75

6.06

17

1151.50

5.31

18

1152.00

4.81

19

1152.50

4.31

20

1152.84

3.97

3.43

1157.66

2.58

1154.23

21

1152.30

5.36

B.M.

3.84

1153.82

1153.81 record

R.P. spike, E. side 18" Maple Left Sta. 21+28

28

B.M. 2.45 1156.24 1153.81

22 1151.60

23 1151.04

24 1151.30

25 1151.70

6.62 1158.32 4.56 1151.70

26 1152.10

27 1152.95

28 1155.50

B.M. 0.78 1157.54

0.78 1158.28 1157.50 record

10.74 1168.87 0.15 1158.13

29 1158.65

30 1162.75

31 1166.31

32 1168.50

7.83 1176.32 0.38 1168.49

33 1170.00

34 1171.50

Sept. 12, 1930

Cloudy 75°

R.P. spike, E. side 18" Maple Lt. Sta. 21428

4.66

5.22

4.96

4.56

6.22

5.37

2.82

Bent Spike N.W. root 12" Maple Pt. 28169

10.22

6.12

2.56

0.37

6.32

4.82

D. Parks
R. Hassel
T. Snyder
E. Parks

29

1176.32

35

1173.00

3.32

12.71 1188.71 0.32 1176.00

36

1176.60

12.11

37

1182.30

6.41

38

1186.58

2.13

39

1188.00

0.71

8.66 1196.65 0.72 1187.99

40

1188.75

7.90

41

1191.00

5.65

42

1193.81

2.84

43

1195.32

1.33

4.23 1197.56 1.32 1195.33

44

1195.32

4.24

B.M.

1.56 1198.00

1197.99 record

R.P. spike N.W. side 24" Maple Rt. 44+23

B.M. 13.02 1172.12 1159.10

12.83 1183.51 1.44 1170.68

48 1177.71

5.11 1188.38 0.24 1183.27

47 1185.38

B.M. 12.97 1172.07 1159.10

49 1168.45

50 1166.45

11.87 1178.33 5.61 1166.46

13.03 1191.60 0.36 1177.97

52 1183.67

Sept, 29, 1930

D. Parks
T. Snyder

cloudy 50°

Spike, W. root 15" Birch Rt. sta. 49+51

5.80°

stake set

3.00 2.00 @ 1.0

spike, W. root 15" Birch Rt. sta. 49+51

3.62

5.62

7.33

1171.81

50

1166.45

50+25

1167.51

50+50

1169.20

12.4 1182.60 1.41 1170.20

51

1174.00

51+50

1179.00

2.88 1179.72

13.12 1192.84 1179.72

52

1183.67

+50

187.67

53

1191.00

11.10 1202.10 1.84 1191.00

53+50

1193.67

54

1195.67

54+50

1197.00

55

1198.00

3.20 1198.90

3.20 1202.07 1198.87

5.34

1168.00

3.81 1.55 High

4.30

1168.00

3.81 0.5 High

2.61

1169.50

2.31 0.3 High

8.60

1175.00

7.60 1.0 High

3.60

Stake Lt ~~51+50~~ 51+50

Oct. 7, 1930, Cloudy, 55° Marks, Snyder, Merritt

9.17

5.17

1.84

8.43

6.43

5.10

4.10

B.M. S. Side 18" Maple, L. 55+31

Record

1202.07

56

1200.00

2.07

57

1202.00

6.48

1208.46

0.09

1201.98

58

1203.57

4.89

59

1204.10

4.36

60

1204.20

4.26

61

1204.30

4.16

62

1204.40

4.06

63

1204.50

3.96

64

1204.00

4.46

64+50

1203.75

4.71

12.48	1171.58	1159.10
17.35		1154.23
5.76		1165.82
6.21		1165.37

B.M. Right 49+51

Top of Footer, S. side Plan, 1154.5

Crown of Intrales, S. " 1166.0

" " " N. 1166.0

58100

A 500'

B 1000'

44

45

46

47

48

49

50

51

52

53

54

55

1219.52

12

1215.00

4.41 1220.14 3.79 1215.73

13

1215.00

4.33 1218.87 5.60 1214.54

14

1215.00

15

1214.75

5.03 1213.84

4.52	3.95	$\frac{C0.6}{22.5}$	4.15	$\frac{C0.4}{22.0}$
------	------	---------------------	------	---------------------

5.14	4.48	$\frac{C0.7}{22.0}$	4.41	$\frac{C0.7}{23.0}$
------	------	---------------------	------	---------------------

3.87	3.53	$\frac{C0.3}{21.5}$	4.33	$\frac{F0.5}{20.5}$
------	------	---------------------	------	---------------------

4.12	4.49	$\frac{F0.4}{20.0}$	5.74	$\frac{F1.6}{20.5}$
------	------	---------------------	------	---------------------

Slope hub Rt. sta. 16700

60

1.61 1215.45 1213.84

16. 1212.00

17 1204.00

0.42 1203.33 12.54 1202.91

3.25 $\frac{1196.68}{3.15}$ 9.90 1193.43

18 1196.00

T.P. 7.77 1188.91

Sept. 8, 1930

D. Parks
E. Parks
T. Snyder

61

Slope hub Ft. Sta. 12+00

3.45	1.85	$\frac{C1.6}{24.0}$	1.61	$\frac{C1.8}{24.5}$
11.45	4.08	$\frac{C7.4}{31.5}$	5.63	$\frac{C5.8}{30.0}$

0.68	0.29	$\frac{C0.4}{21.0}$	1.95	$\frac{F1.3}{19.0}$
------	------	---------------------	------	---------------------

South
N.W. cor. West Wing Wall

62

6.70 1195.61 1189.91

19 1189.50

20 1190.03

21 1197.00

15.04 1209.95 0.70 1194.91

21 1197.00

22 1203.94

22+27 1204.57

4.02 1205.93

4.62 1210.70 1205.78

23 1204.65

24 1204.30

25 1204.40

T.P 4.74 1209.46 5.68 1204.72

26 1204.50

27 1204.60

63

Sept. 10, 1930

W. Marks
R. Hassel
T. Snyder

X, N.W cor West Wing Wall

6.11 $\frac{13.52}{25.0}$ $\frac{F 7.4}{19.0}$ 8.985.58 10.38 $\frac{F 4.8}{23.5}$ $\frac{F 2.5}{19.5}$ 8.08+ 1.39 0.70 $\frac{F 2.1}{21.5}$ 12.95 $\frac{C 7.7}{32.0}$ 5.226.01 4.64 $\frac{C 1.4}{23.0}$ $\frac{C 2.1}{24.0}$ 3.865.38 4.62 $\frac{C 0.8}{21.5}$ $\frac{C 0.4}{23.0}$ 5.00

R.P. Spike, S.E. Side 12" Pear, 32' L. Sta. 22+75

5.75 5.77 $\frac{0.0}{21.0}$ $\frac{C 0.6}{23.0}$ 5.266.10 5.7 $\frac{C 0.4}{21.0}$ 5.746.00 6.92 $\frac{F 0.9}{20.0}$ $\frac{0.0}{21.5}$ 6.04

Slope Hub, Right Sta 26+00

4.96 6.15 $\frac{F 1.2}{19.0}$ $\frac{C 0.2}{21.5}$ 4.744.86 5.60 $\frac{F 0.7}{20.5}$ $\frac{F 0.3}{21.0}$ 5.13

64

1209.46

28

1205.50

3.96 4.92

 $\frac{F1.0}{20.3}$ $\frac{F1.3}{20.0}$

5.25

29

1206.40

3.06 3.59

 $\frac{F0.5}{21.0}$ $\frac{C0.3}{22.5}$

2.78

30

1207.10

2.36 1.90

 $\frac{C0.5}{22.0}$ $\frac{C1.2}{23.0}$

1.16

2.43 1210.73 7.16 1208.30

31

1206.54

4.19 4.19

 $\frac{0.0}{21.5}$ $\frac{C0.6}{23.0}$

3.64

32

1205.78

4.75 5.98

 $\frac{F1.0}{20.0}$ $\frac{F0.4}{21.0}$

5.39

33

1204.43

6.30 6.50

 $\frac{F0.2}{21.0}$ $\frac{C0.3}{21.5}$

6.00

34

1202.00

8.73 7.12

 $\frac{C1.6}{27.0}$ $\frac{F0.9}{17.5}$

9.66

B.M.

6.96

65

66

T. P. 4.44 1188.59 1184.15

48+62 1179.50

1179.50

48+62 reset culvert & stake
30' Lt

Sept. 12, 1930

D. Parks
T. Snyder
R. Hassel
E. Parks

67

X-S.W. cor. W. Headwall Culvert Sta. 48+62

9.09 6.09 C 3'0" stake 30' Lt.

9.09 6.09 C 3'0" stake 30' Rt.

Sept. 30, 1930

D. Parks
R. Hassel
T. Snyder

68

B.M.	1.51	1205.20		1203.69
35				1199.68
35+50				1199.02
36				1198.70
	5.01	1203.21	7.00	1198.20
36+50				1198.55
37				1198.40
37+50				1198.25
38				1198.35
38+50			2.67	1198.95
39				1199.80
40				1201.66
	8.12	1209.67	1.66	1201.55
40+65				1203.45
41				1203.78
B.M.			3.45	1206.22
	3.45	1209.69		1206.24 record
41+25				1203.63
42				1201.75

Sept. 24, 1930

D. Parks
R. Hassel

69

Showers 70°

T. Snyder

Spike N. root 36" Chestnut	150' E. of E. of Jugst			
		<u>F2.9</u>		<u>F2.2</u>
5.52	8.38	24.0	7.75	<u>17.5</u>
		<u>F2.2</u>		<u>F1.5</u>
6.18	8.36	25.5	7.66	<u>17.0</u>
		<u>F0.8</u>		<u>F2.1</u>
6.50	7.27	27.0	8.57	<u>17.0</u>
		<u>F0.4</u>		<u>F1.8</u>
4.66	5.01	28.0	6.47	<u>20.5</u>
		<u>F1.2</u>		<u>F2.3</u>
4.81	5.96	28.0	7.06	<u>17.5</u>
		<u>F2.7</u>		<u>F1.4</u>
4.96	7.69	25.0	6.56	<u>18.0</u>
		<u>F0.4</u>		<u>F0.1</u>
4.86	5.22	28.0	4.98	<u>20.0</u>
		<u>C1.6</u>		<u>C2.0</u>
4.26	2.64	28.0	2.30	<u>23.0</u>
		<u>F1.0</u>		<u>C0.2</u>
3.41	4.40	20.0	3.20	<u>21.0</u>
		<u>C2.6</u>		<u>F1.2</u>
1.55	4.10	17.0	2.74	<u>17.5</u>
		<u>C0.9</u>		<u>C1.9</u>
4.22	5.33	22.5	4.36	<u>23.5</u>
		<u>C1.3</u>		<u>C2.2</u>
5.89	4.62	23.0	3.71	<u>25.0</u>
R.P. spike N. root 36" Chestnut	RT. 41+10			
		<u>C1.5</u>		<u>2.1</u>
6.06	4.60	14.0	3.97	<u>25.0</u>
		<u>C2.2</u>		<u>C3.0</u>
7.94	5.78	18.5	4.94	<u>26.5</u>

1209.69

42+30

1200.92

42+70

7.75

1207.30

10.14

1199.55

42+70

1199.94

43+50

1199.59

43+55

1200.44

44

1200.70

44+30

1200.75

45

1198.25

4.14

1198.44

13.00

1194.30

46

1193.50

46+70

1190.17

8.00

1202.30

4.14

1194.30

12.29

1190.01

8.77

7.37

C 1.4

23.5

8.40

C 0.4

20.5

F 4.3

7.36

11.67

23.0

9.82

19.0

F 3.9

7.71

11.61

22.5

9.57

F 1.9F 3.8

6.86

10.64

21.0

6.70

F 0.8C 0.6

6.60

6.00

22.5

5.20

C 1.4C 1.2

6.55

5.38

23.0

4.91

24.0

C 0.4

9.05

8.64

22.0

7.09

C 1.6

24.5

0.0

4.94

4.96

22.0

2.30

C 2.6F 3.7

8.27

11.94

19.0

8.43

25.5

F 0.2

22.0

Slope hub Pt. sta 46+70

72

T.P 0.66 1190.67 1190.01

47 1188.75

47+30 1187.45

48 1185.44

49 1185.00

49+40 1185.78

49+55 1186.28

50 1188.40

T.P 0.80 1189.87

Sept. 29, 1930

D. Parks
T. Snyder

73

cloudy 50°

Slope hub RT, sta. 46+70

	<u>F 3.7</u>	<u>F 2.6</u>
1.92	18.5	20.0
	<u>F 3.7</u>	<u>F 1.9</u>
3.22	20.0	19.5
	<u>F 3.6</u>	<u>F 2.3</u>
5.23	20.0	19.5
	<u>F 1.1</u>	<u>F 2.2</u>
5.67	21.0	17.5
	<u>0.0</u>	<u>F 2.1</u>
4.89	21.5	19.5
	<u>C 1.0</u>	<u>C 0.7</u>
4.39	22.5	22.5
	<u>C 1.5</u>	<u>C 1.0</u>
2.27	23.0	24.0

Slope hub LT, sta. 50+00

74

2478.5 18" Pipe Culvert

B.M. 1.62 1224.33 1222.71
 5.32 1222.39 7.26 1217.07

2178.5

Pipe

Oct. 2, 1930
 Marks, Snyder

2.39 1219.80

4.5

1217.41 1215.41
~~1215.3~~
 1217.41 1214.41
 1213.81

10140 15" Pipe Culvert

B.M. 2.00 1219.75 1217.75

1211.75

1212.76

25195 15" Pipe Culvert

B.M. 4.15 1209.93 1205.78
 4.72 1209.11 5.54 1204.39

1201.25

1202.26

Sept. 30, 1930

D. Parks
 R.L. Hassel
 T. Snyder

75

Cloudy

Spike 17 foot 18" Hickory

~~8.74 5.74 c3'0" stake 30' Lt,~~6.98 4.98 ~~c2'0"~~ stake 30' Rt,

Perry stone's tile cellar drain
 5.39 2.39 c3'0" stake 30' Rt,
 5.99 2.99 c3'0"

R.P. spike S.E. side 24" Maple 9+55

8.00 6.00 c2'0" stake 30' Lt,

6.99 5.99 c1'0" stake 30' Rt,

R.P. spike S.E. side 12" pear 32' Lt, 22176

7.86 5.36 c2'6" stake 30' Lt,

6.85 2.85 c4'0" stake 30' Rt,

Culvert Sta 53+00 to 53+35

5.5 1199.5 1194.0

1191.60

1192.9

1188.0

1190.8

Hubbard Rd,

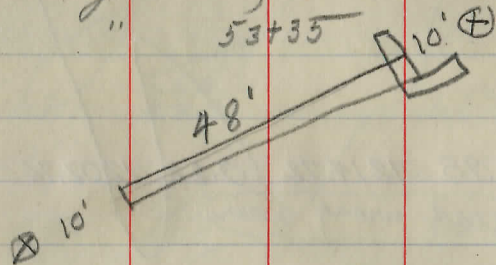
$$\begin{array}{r} 115 \\ 115 \\ \hline 575 \\ 115 \\ \hline 1322.5 \end{array}$$

$$\begin{array}{r} 1194.7 \\ 1.8 \\ \hline 1192.9 \end{array}$$

Slope Hub, Left, 53+00

Pavement Grade, Sta 53+00

" " 53+35



11.5

4.5

Cut 7'0" stake 10' out from Outlet

8.7

2.7

Cut 6'0" " " " " Inlet

Oct. 11, 1930 D. Parks - T
 clear, 75° R. Hassel - Notes
 T. Snyder - Rod.

B.M.	3.13	1226.57		1223.54	
58				1222.90	
T.P	3.59	1226.02	4.14	1222.43	
57				1222.84	
56				1222.00	
55				1219.50	
54				1214.00	
T.P	1.99	1215.40	12.61	1213.41	
53				1207.00	
T.P	1.57	1204.60	12.37	1203.03	
52				1200.15	
51				1194.20	
T.P			2.77	1201.83	

L.		R.	
Spike N. root 15" Maple Rt. 58+70			
3.67	4.43	$\frac{E0.8}{20.5}$	3.05 $\frac{C0.6}{15.5}$
3.18	3.59	$\frac{E0.4}{21.0}$	2.57 $\frac{C0.6}{15.5}$
4.02	3.85	$\frac{C0.2}{18.5}$	2.48 $\frac{C1.5}{15.5}$
6.52	5.74	$\frac{C0.8}{18.5}$	4.39 $\frac{C2.1}{23.0}$
12.02	9.63	$\frac{C2.4}{25.0}$	9.05 $\frac{C3.0}{26.0}$
8.40	5.83	$\frac{C2.6}{25.5}$	5.56 $\frac{C2.8}{25.5}$
4.45	3.75	$\frac{C0.7}{23.0}$	3.67 $\frac{C0.8}{23.0}$
16.40	8.59	$\frac{C1.8}{24.0}$	9.79 $\frac{C0.6}{22.5}$
top of slope Moker Lt, Sta. 52+00			

B.M.	2.67	1226.21		1223.54
59				1222.80
60				1222.70
61				1222.60
62				1222.50
63				1222.40
T.P.	6.42	1227.40	5.23	1220.98
64				1222.20
65				1222.14
66				1222.75
67				1223.50
7.07	7.07	1230.44	4.03	1223.37

L			R	
Spike N root 15" Maple Rt. 58+70				
3.41	4.73	$\frac{F1.3}{19.5}$	3.95	$\frac{F0.5}{19.5}$
3.51	4.85	$\frac{F1.3}{19.0}$	4.23	$\frac{F0.7}{20.0}$
3.61	5.06	$\frac{F1.5}{19.5}$	4.24	$\frac{F0.6}{21.0}$
3.71	4.25	$\frac{F0.5}{20.5}$	3.40	$\frac{C0.3}{22.0}$
3.81	5.22	$\frac{F1.4}{20.0}$	3.56	$\frac{C0.3}{22.0}$
5.20	5.98	$\frac{F0.8}{21.0}$	5.55	$\frac{F0.4}{21.0}$
5.26	5.91	$\frac{F0.7}{21.0}$	5.05	$\frac{C0.2}{21.5}$
4.65	5.52	$\frac{F0.9}{20.0}$	4.36	$\frac{C0.3}{22.5}$
3.90	5.04	$\frac{F1.1}{20.0}$	4.06	$\frac{F0.2}{21.5}$

1230.44

68

1223.70

6.74

7.61

 $\frac{F0.9}{29.0}$

4.60

 $\frac{C0.1}{22.0}$

69

1223.90

6.54

7.17

 $\frac{F0.6}{21.0}$

6.03

 $\frac{C0.5}{22.0}$

70

1225.35

5.09

5.83

 $\frac{F0.7}{21.0}$

B.M

2.83 1227.61

(227.57 record)

R.P. spike N.W. side 12" Ash Rt. sta. 70+40

86

15" culvert Pipe

B.M. 3.79 1207.48 1203.69

33+10 1201.83

33+18 1200.27

Oct. 11, 1980

D. Parks

87

R. Hassel

Clear 75°

T. Snyder

Spike N. root 36" Chestnut 150' E of Jug St.

5.65 2.65 C 3'0"

7.21 2.71 C 4'6"

B.M 1.50 1224.21 1222.71

1 1218.00

2 1218.00

3 1218.00

4 1218.00

5 4.82 1222.83 6.20 1218.01

5 1218.00

6 1218.33

7 1218.67

8 1218.42

9 1217.00

10 1216.25

3.38 1220.54 5.67 1217.14

B.M, 2.80 1217.74

2.11 1219.86 1217.75 record

11 1215.00

12 1215.00

13 1215.00

14 1215.00

Oct. 13, 1930

D. Parks
R. Hassel
T. Snyder

Clear 70°

spike 17 foot 18" Hickory

6.21

6.21

6.21

6.21

4.83

4.50

4.14

4.41

5.83

7.58

R.P. spike S.E. side 24" Maple 9+55

4.86

4.86

4.86

4.86

1219.84

3.20 | 1218.20 4.86 | 1215.00

15

1214.75

16

1212.00

6.20 | 1212.00

3.45

6.20

finish Grade stake Lt. sta. 16+00

T, P	1.01	1213.01		1212.00
17				1204.00
	0.21	1200.23	12.99	1200.02
18				1196.00
19				1189.60
20				1190.03
21				1197.00
	11.46	1209.97	1.72	1198.51
22				1203.94
22+27				1204.57
B. M.			4.12	1205.85
	4.12	1209.90		1205.78 record
23				1204.65
24				1204.30
25				1204.40
	6.58	1211.24	5.24	1204.66
26				1204.50
27				1204.60
28				1205.50

Oct, 15 1930
 Shower 2:00 to 2:30
 Clear 75°

D. Parks
 R. Hassel
 T. Snyder

finish grade stake 7t. sta. 16+00

9.01				
4.23				
10.73				
10.20	stake Lt. 8.20 C20		stake Rt. 9.20 C1.0	
3.23	stake Lt. 1.73 C1.5		stake Rt. 1.73 C1.5	
6.03				
5.40				
	R. P. spike S.E. side 12" peg 32' Lt. 22+75			
5.25				
5.60				
5.50				
6.74				
6.64				
5.74				

1211.24

29

1206.40

4.84

30

1207.10

4.14

31

1206.64

4.70

32

1205.78

5.46

3.41 1209.17 5.48 1205.76

B.M.

5.47 1203.70

1203.69 record

Spike N. root 36" Chestnut 150' E of E of Jug St.

Finish Grade Stakes

B.M	5.00	1208.69	1203.69
^{reset} 64+50 on Hubbard Rd.			1203.10
33	Jug st.		1204.43
34			1202.00
	1.67	1203.91	6.45 1202.24
35			1199.68
35+50			1199.02
36			1198.70
36+50			1198.55
37			1198.40
T.P.		5.01	1198.90

Oct. 23. 1930

D. Parks
T. Snyder
R. Hassel

Cloudy 35°

spike, N. root 36" Chestnut 150' E of dug st.

4.74

4.26 ^{rest}

right

1211.77 6.92

1212.23 6.46

1199.18 4.73

1200.18 3.73

1198.52 5.39

1199.52 4.39

1198.20 5.71

1199.20 4.71

1198.05 5.86

1199.05 4.86

1197.90 6.01

1198.90 5.01

Finish Grade stake Rt. Sta. 37+00

T.P. 4.49 1203.39 1198.90

37+50

38

38+50

39

5.93 1205.41³ 3.91 1199.48

40

1201.66

T.P.

3.75 1201.66

Finish Grade stake RT, sta 37+00

1197.75 5.64 1198.75 4.64

1197.82 5.57 1198.82 4.57

1198.65 4.74 1199.25 4.14

1199.48 3.91 1199.48 3.91

3.75

Finish Grade stake Lt. sta. 40+00

Oct. 29, 1930

D. Parks
R. Hassel
T. Snyder

clear 45°

R. P. spike IV, root 36" Chestnut

B.M. 1.61 1207.85 1206.24

41 1203.78

4.07

41+25 1203.63

4.22

42 1201.75

6.10

43 1199.59

8.26

43+55 1200.44

7.41

44 1200.70

7.15

2.42 1203.14 7.13 1200.72

44+30 1200.75

2.39

45 1198.25

4.89

46 1193.50

9.64

0.94 1192.21 11.89 1191.25

47 1188.75

3.46

48 1185.44

6.77

stake LT

stake RT

5.77 C 1.0

4.77 C 2.0

49 1185.00

7.21

50 10.94 1201.32 1.83 1190.38

50 1188.40

12.92

stake LT

stake RT

11.92 C 1.0

11.92 C 1.0

51 1184.20

7.12

52 1200.15

1.17

1201.32

12.96 1214.16 0.12 1201.20

53 1207.00 7.16

54 1214.00 0.16

11.38 1225.38 0.16 1214.00

55 1219.50 5.88

56 1222.00 3.38

4.66 1224.64 3.38 1222.00

Finish Grade stake Lt. 56+00

57 1222.84 3.82

58 1222.90 3.76

59 1222.80 3.86

B.M. 3.82 1222.84

Spike N. root 15" Maple Rt. 58+70

1223.54 record

B.M. 3.82 1227.36 1223.54

1.83 1224.53 4.66 1222.70

9.84 1214.69

B, M.	0.69	1206.93	1206.24
41			1203.78
42			1201.75
43			1199.59
43.55			1200.44
44			1200.70
44+30			1200.75
45			1198.25
46	0.34	1194.82	12.47 1194.46
46			1193.60
47			1188.75
48			1185.44
49			1185.00
50			1188.40
51			1194.20
	12.97	1207.14	0.63 1194.19
52			1200.15
53			1207.00

Oct. 30, 1930

Clear 50°

D. Parks
R. Hassel
T. Snyder

R. P. spike N. root 36" Chestnut

3.15

5.18

7.34

6.49

6.23

6.18

8.68

1.32

6.07

stake LT

stake RT

9.38

8.38 C1.0

7.38 C2.0

9.82

stake LT

stake RT

4.42

5.42 C1.0

5.42 C1.0

0.62

7.01

0.14

1207,16

12.74 1219,74 0,16 1207,00

54

1214,00

5,74

55

1219,50

0,24

6.58 1226,08 0,24 1219,50

56

1222,00

4,08

57

1222,84

3,24

58

1222,90

3,18

59

1222,80

3,28

B.M

2,58 1223,50

Spike N root 15" Maple

2,91 1226,45

1223,54 (recor'd)

60

1222,70

3,75

61

1222,60

3,85

62

1222,50

3,95

63

1222,40

4,05

64

1222,20

4,25

5,13 1227,33 4,25 1222,20

65

1222,14

5,19

66

1222,75

4,58

67

1223,50

3,83

1227,33

68

1223,70

3,63

69

1223,70

3,43

5,04

1228,92

3,45

1223,88

70

1225,35

3,57

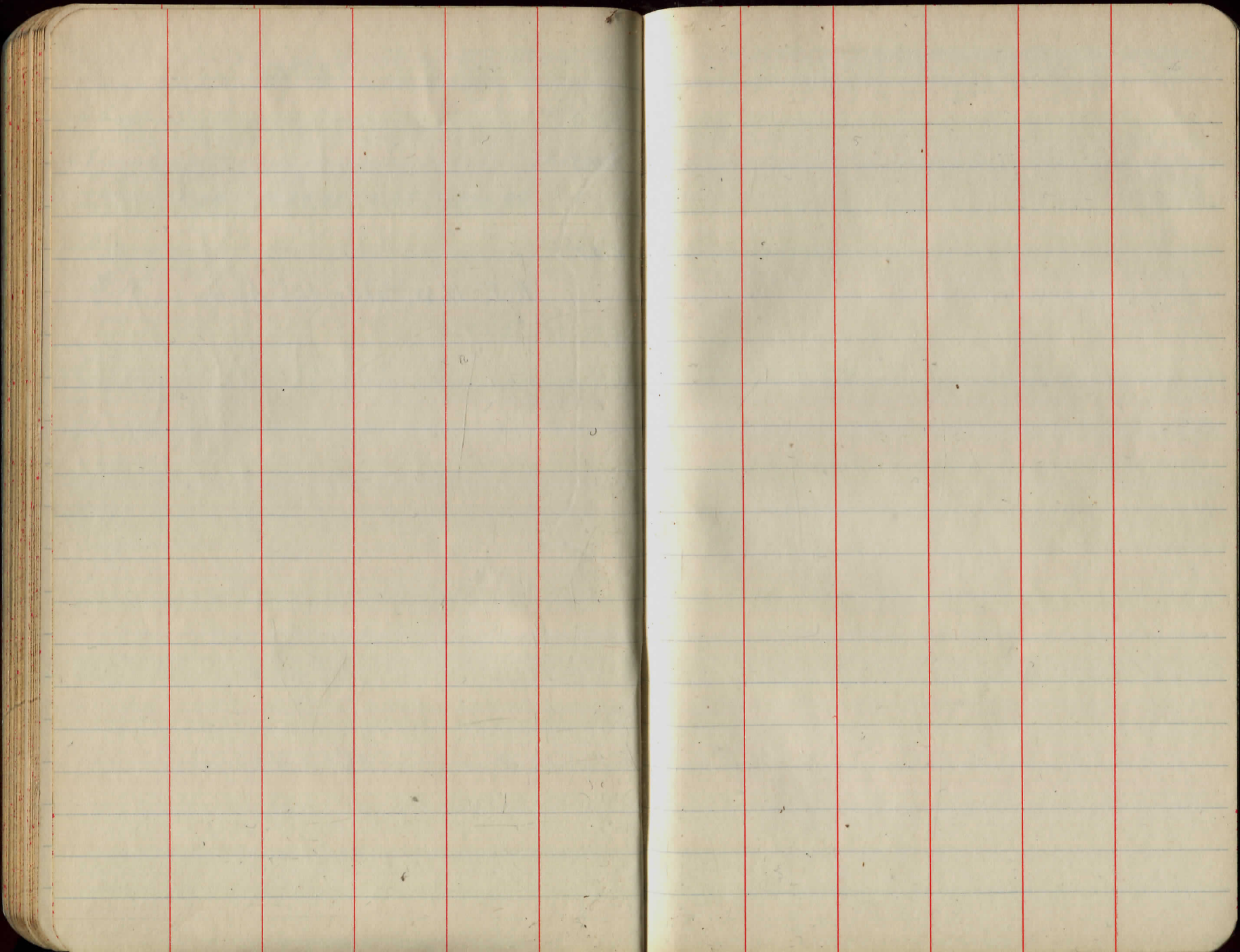
B.M.

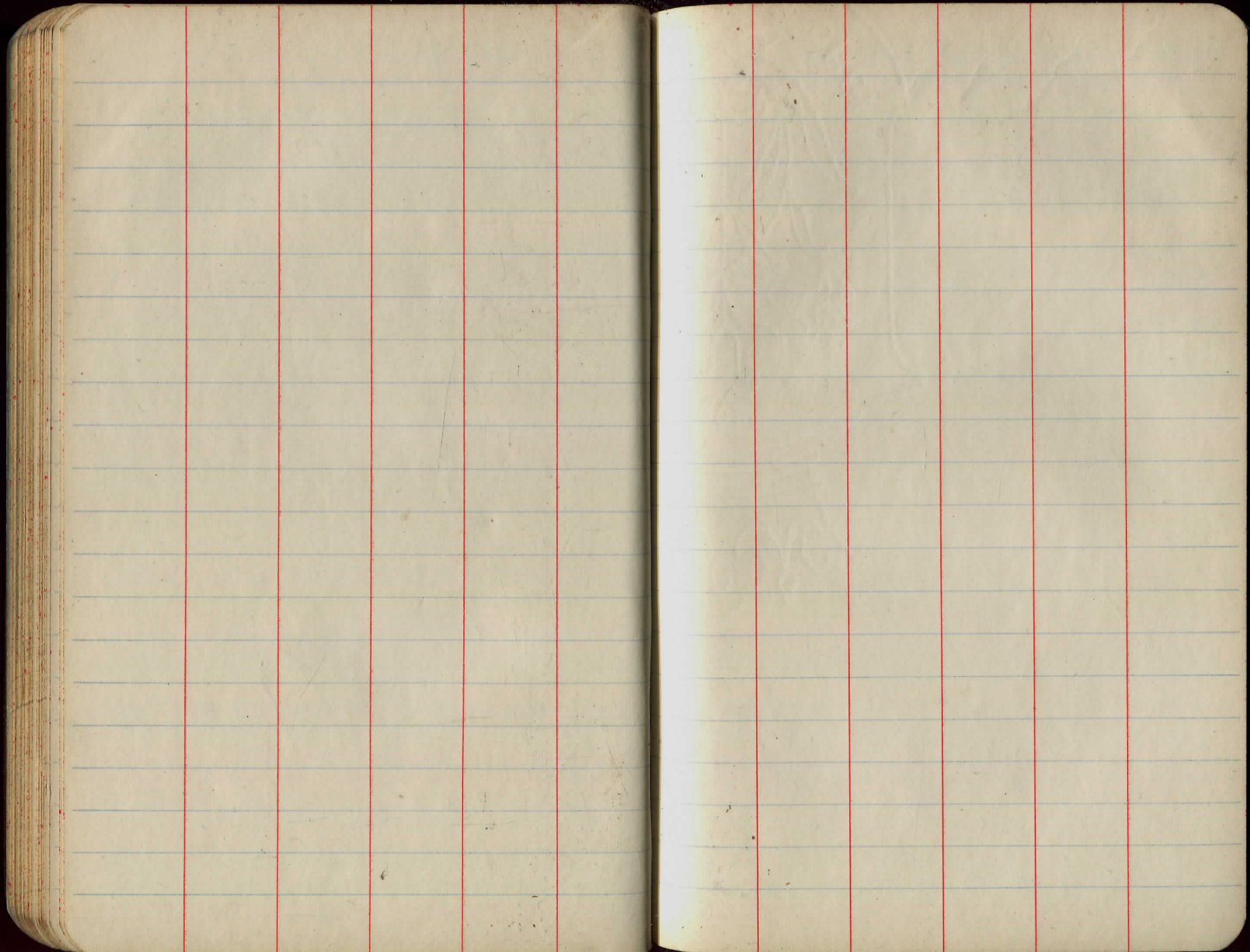
1,34

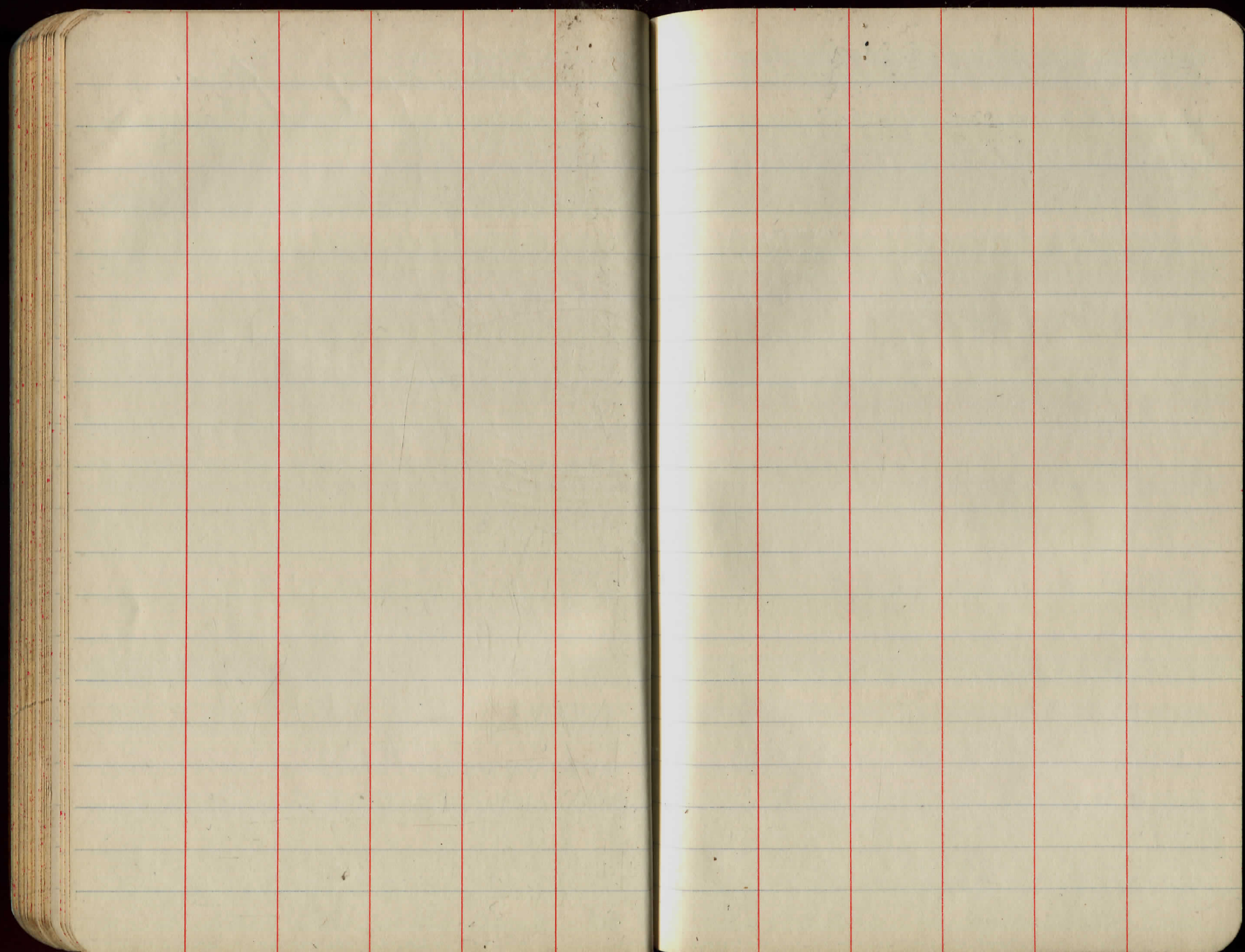
1227,58

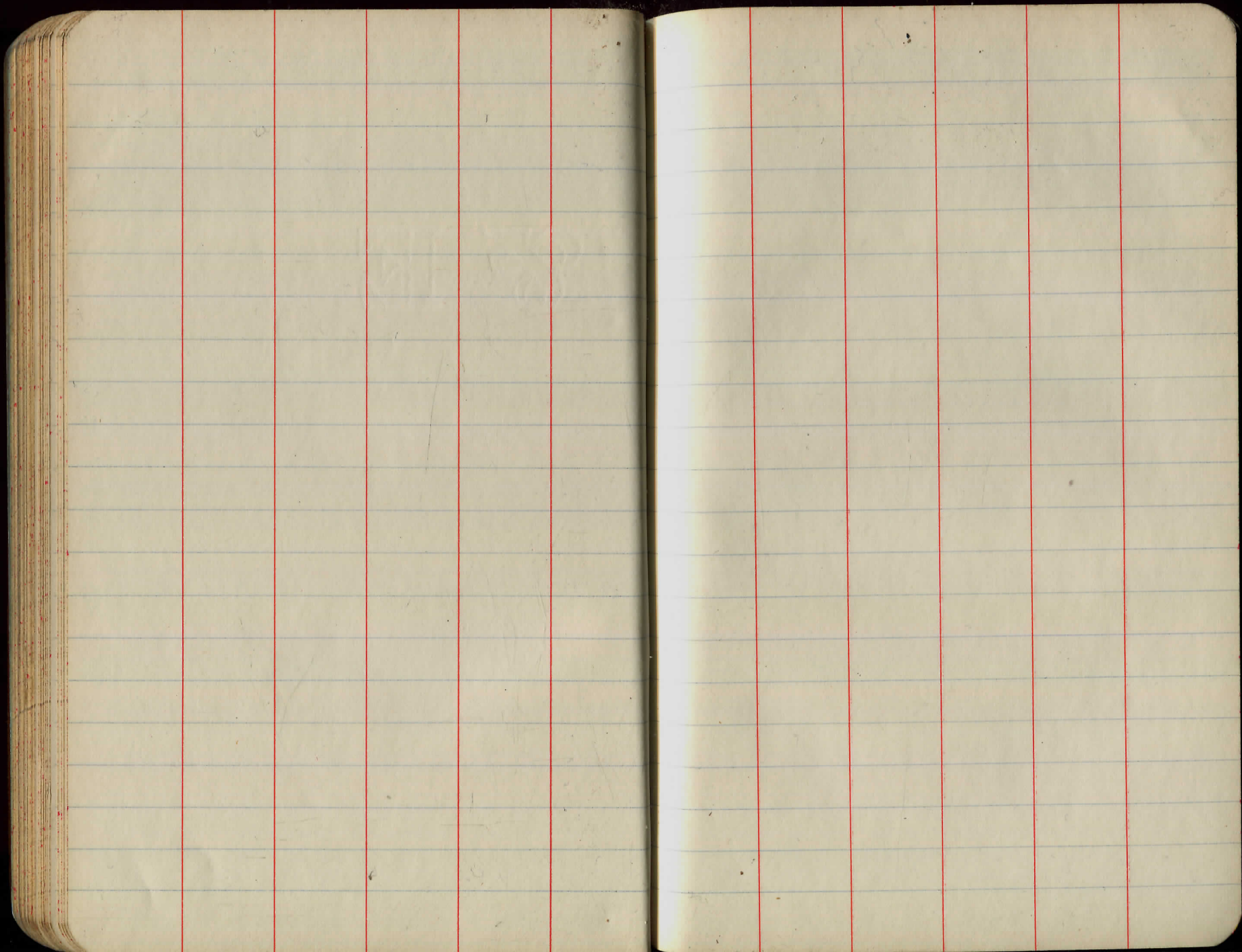
R.P. N.W. side 12" Ash

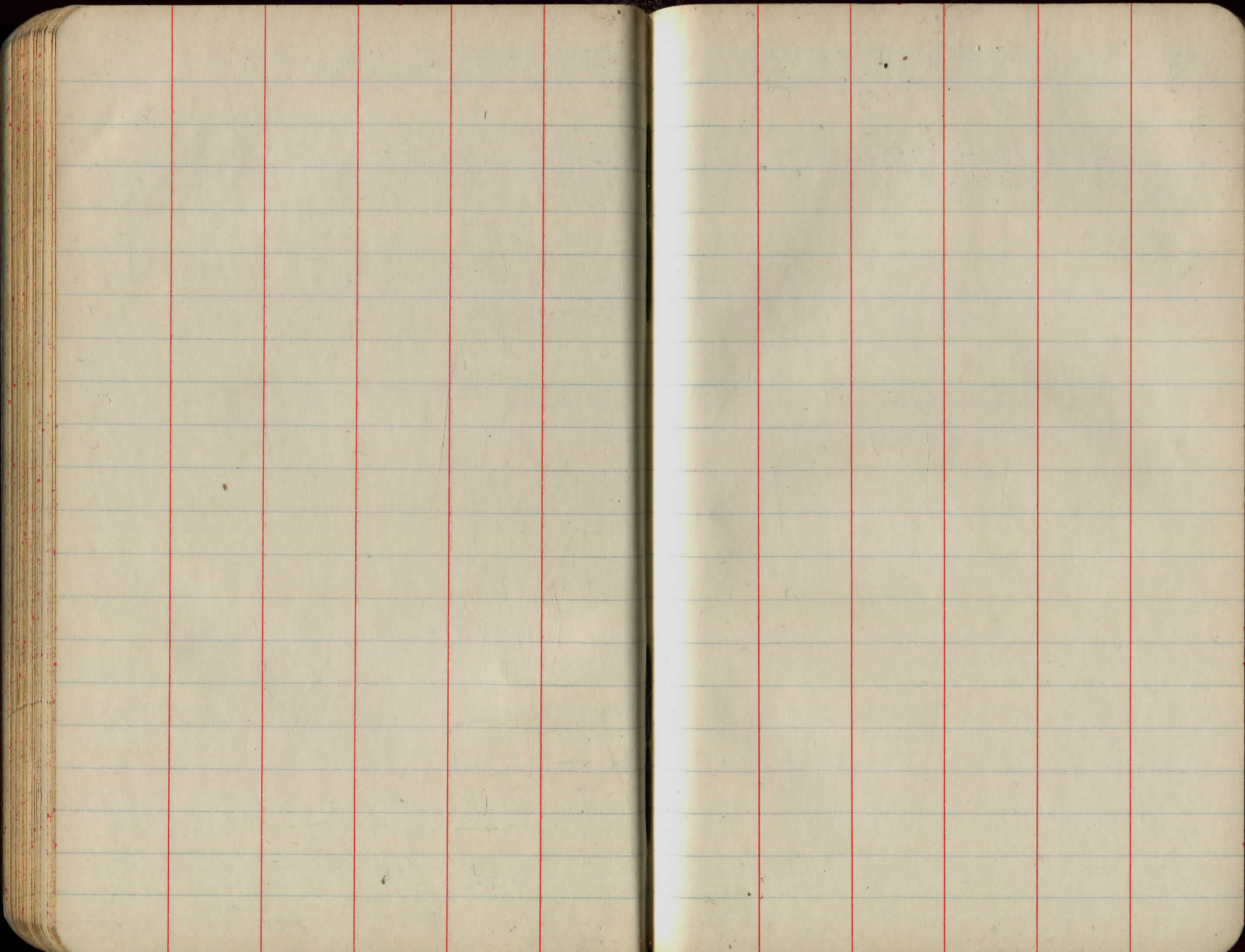
1227,57 record

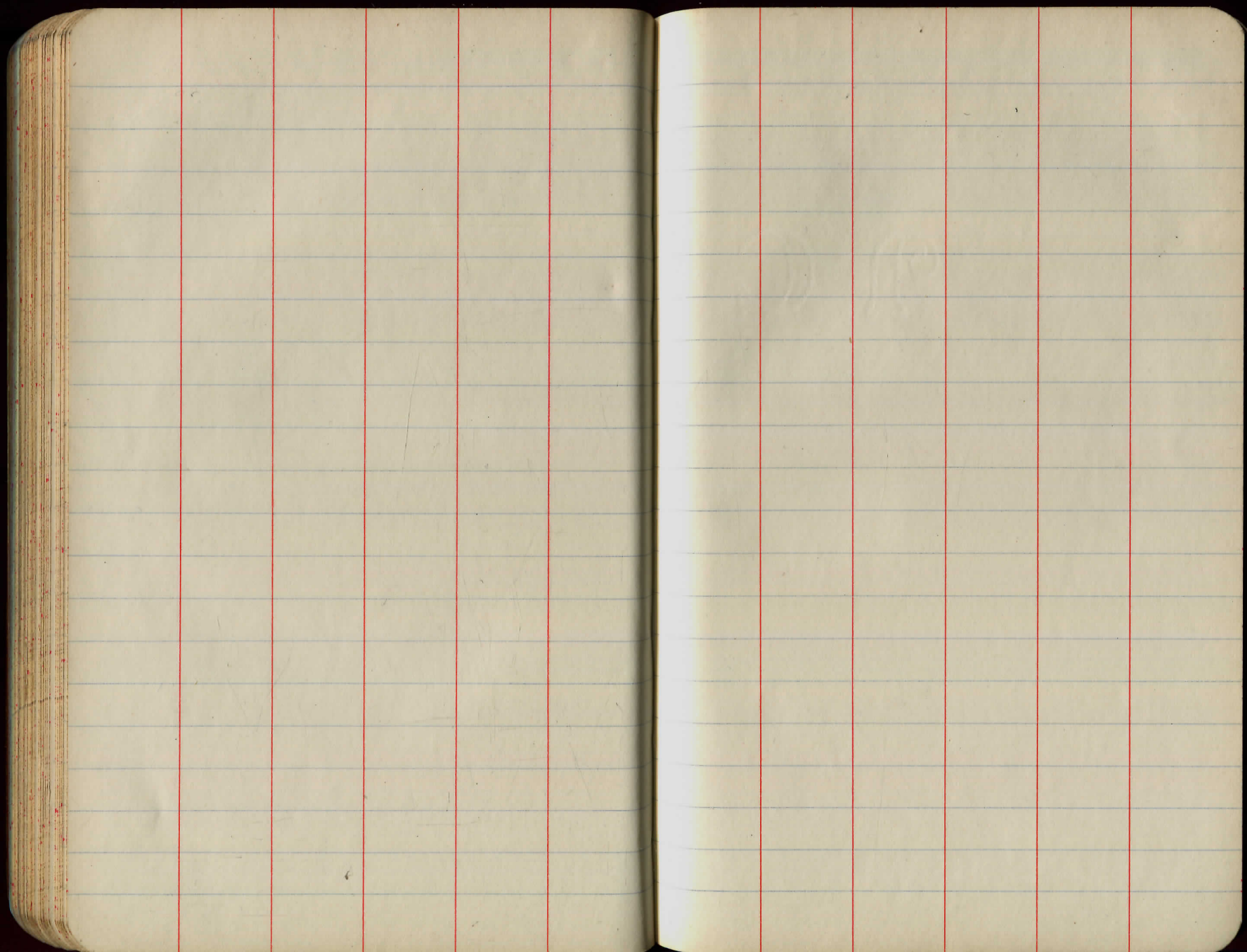


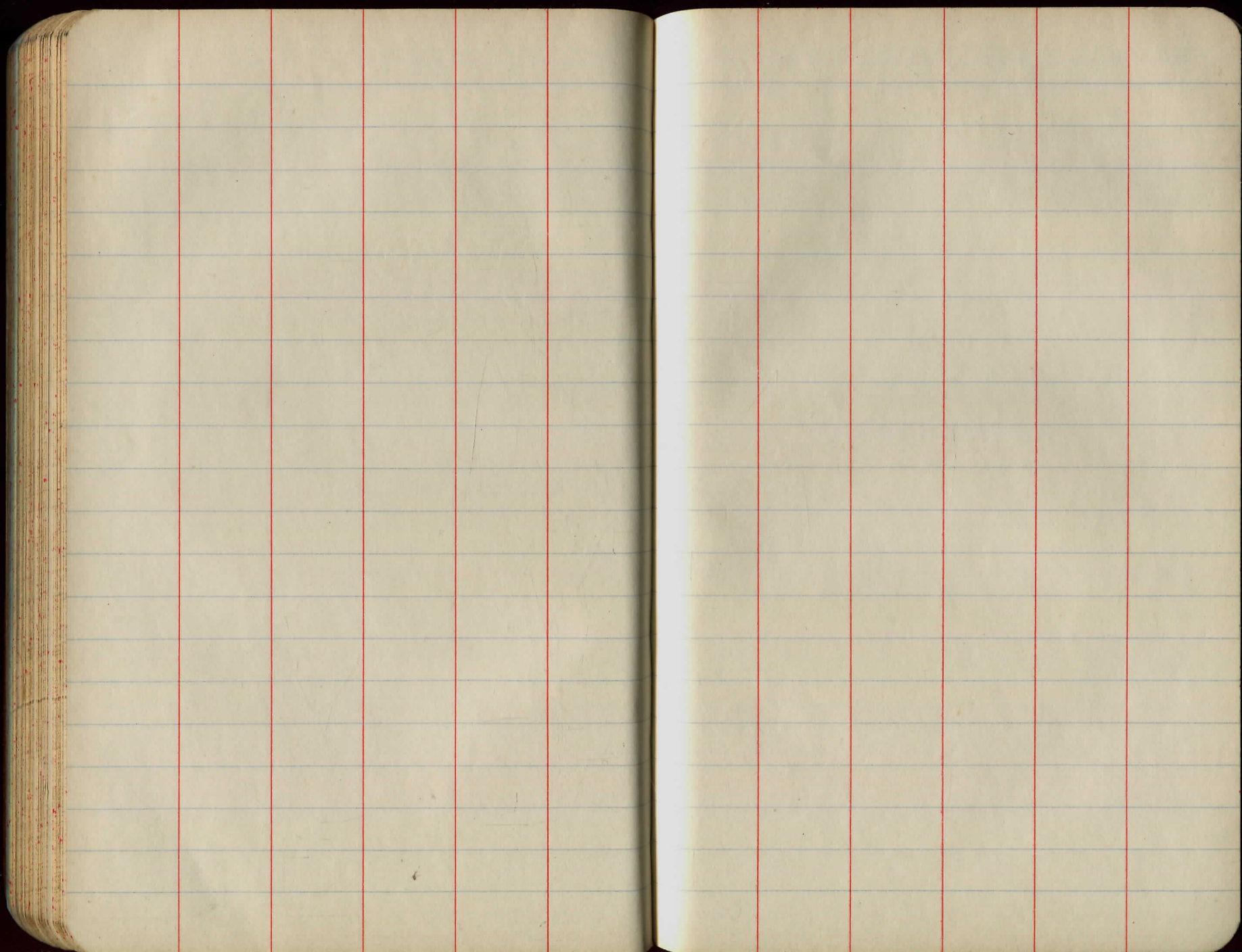


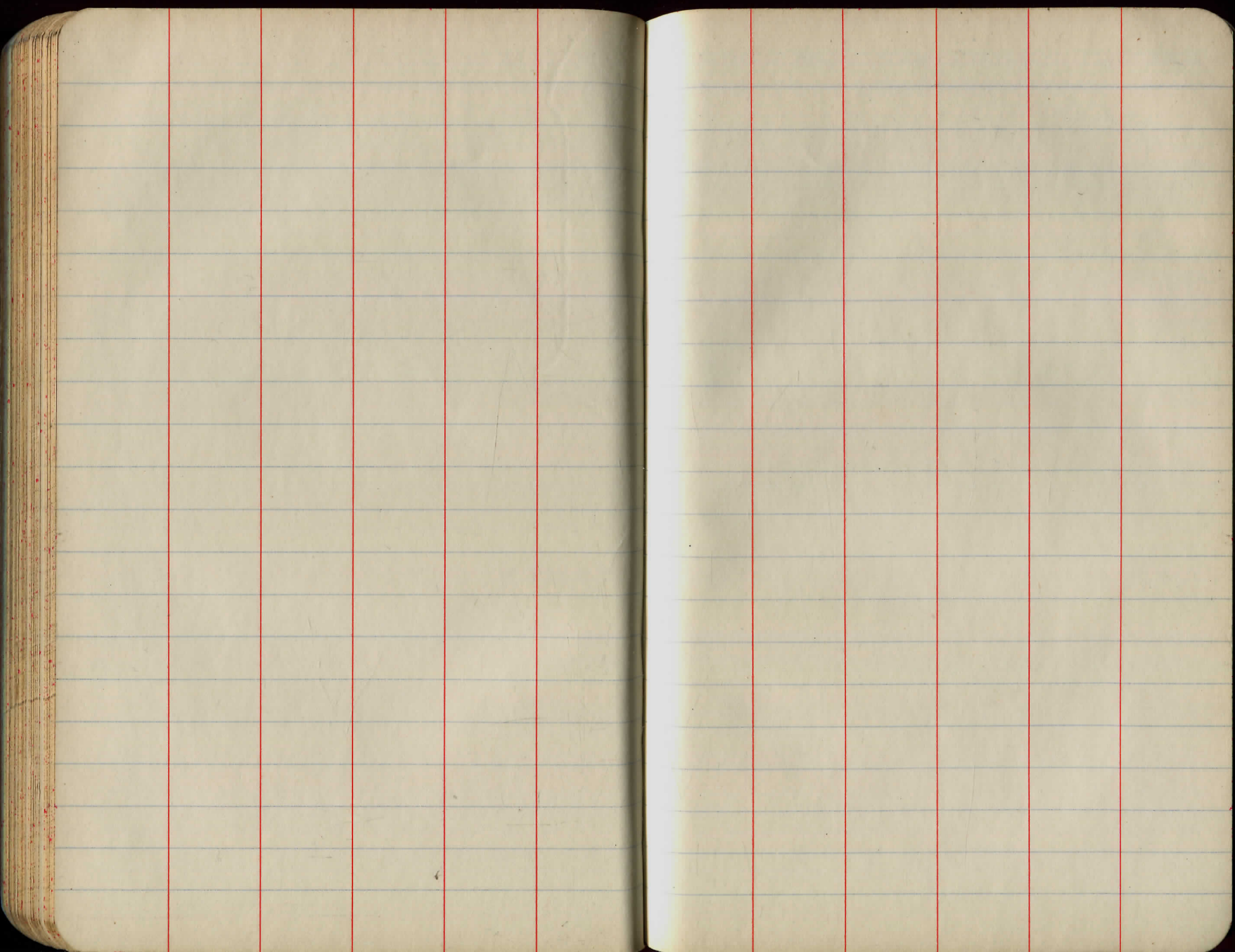


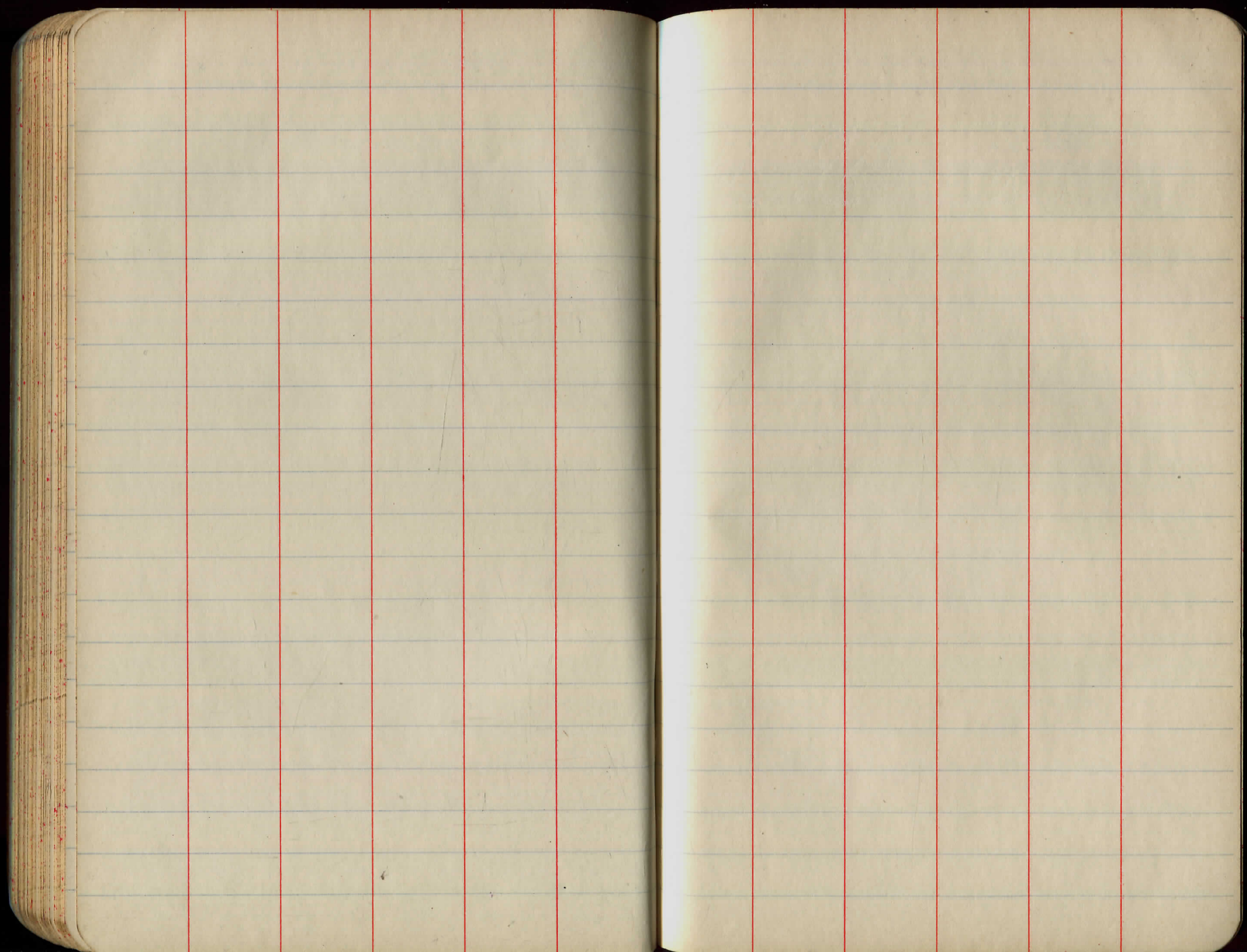


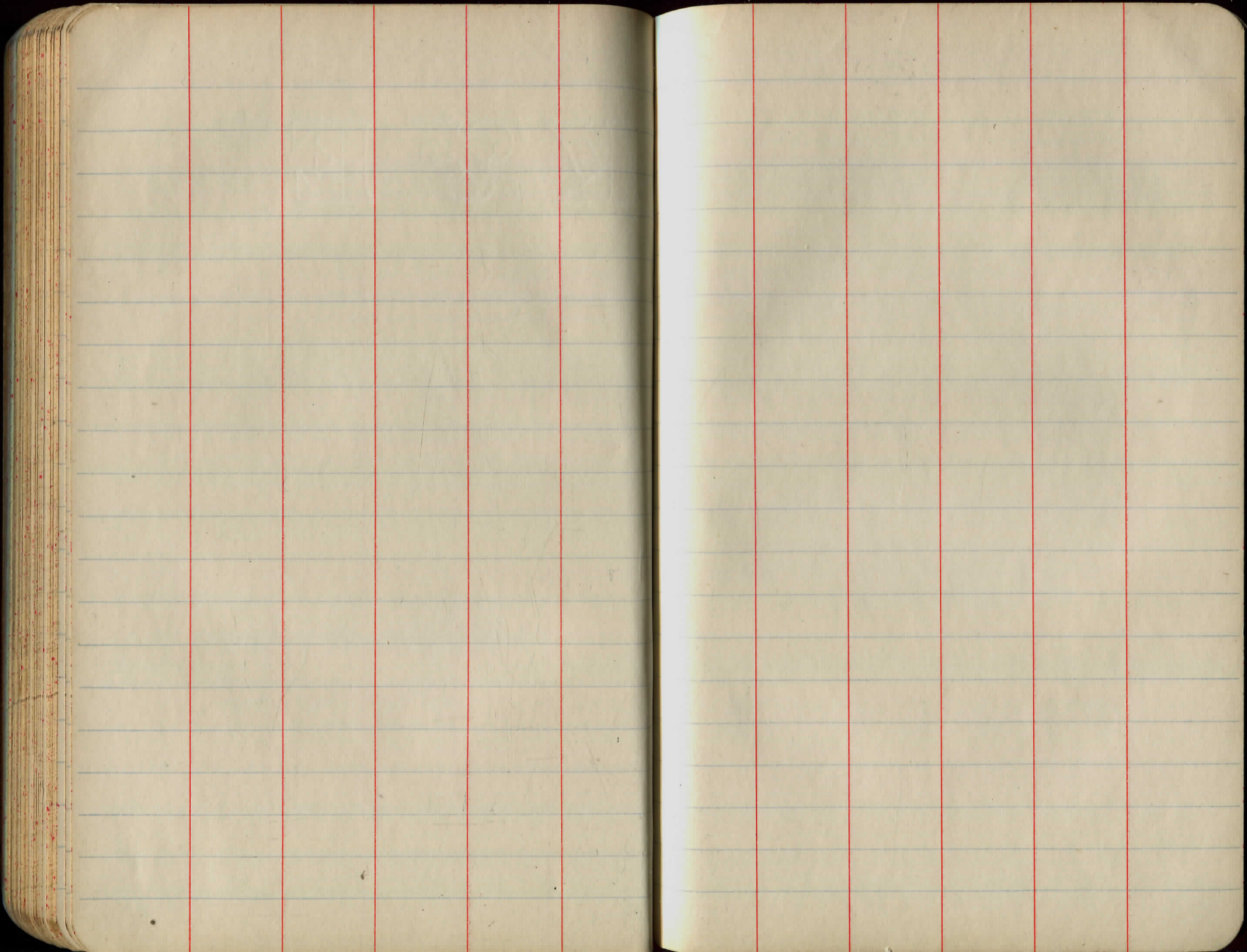


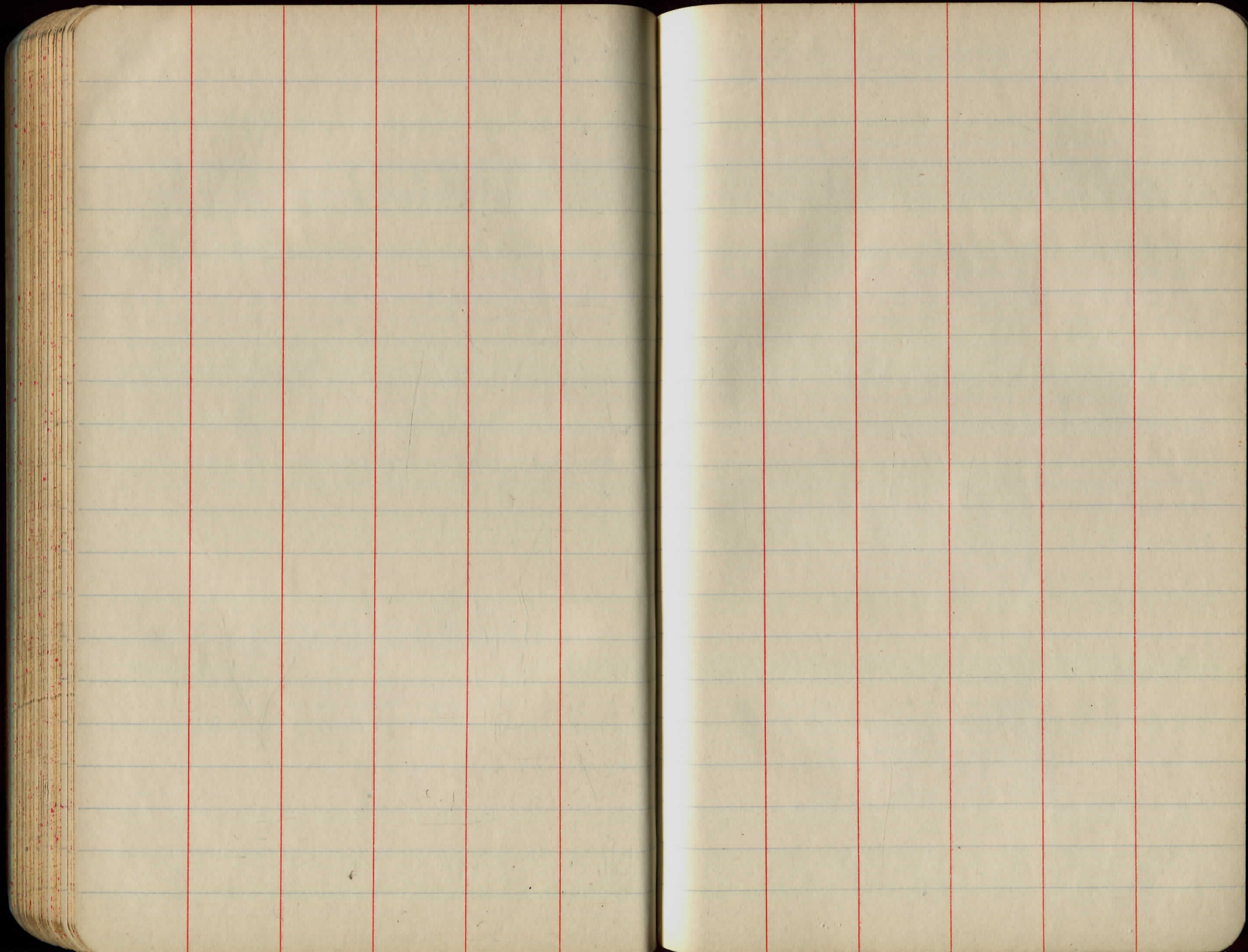


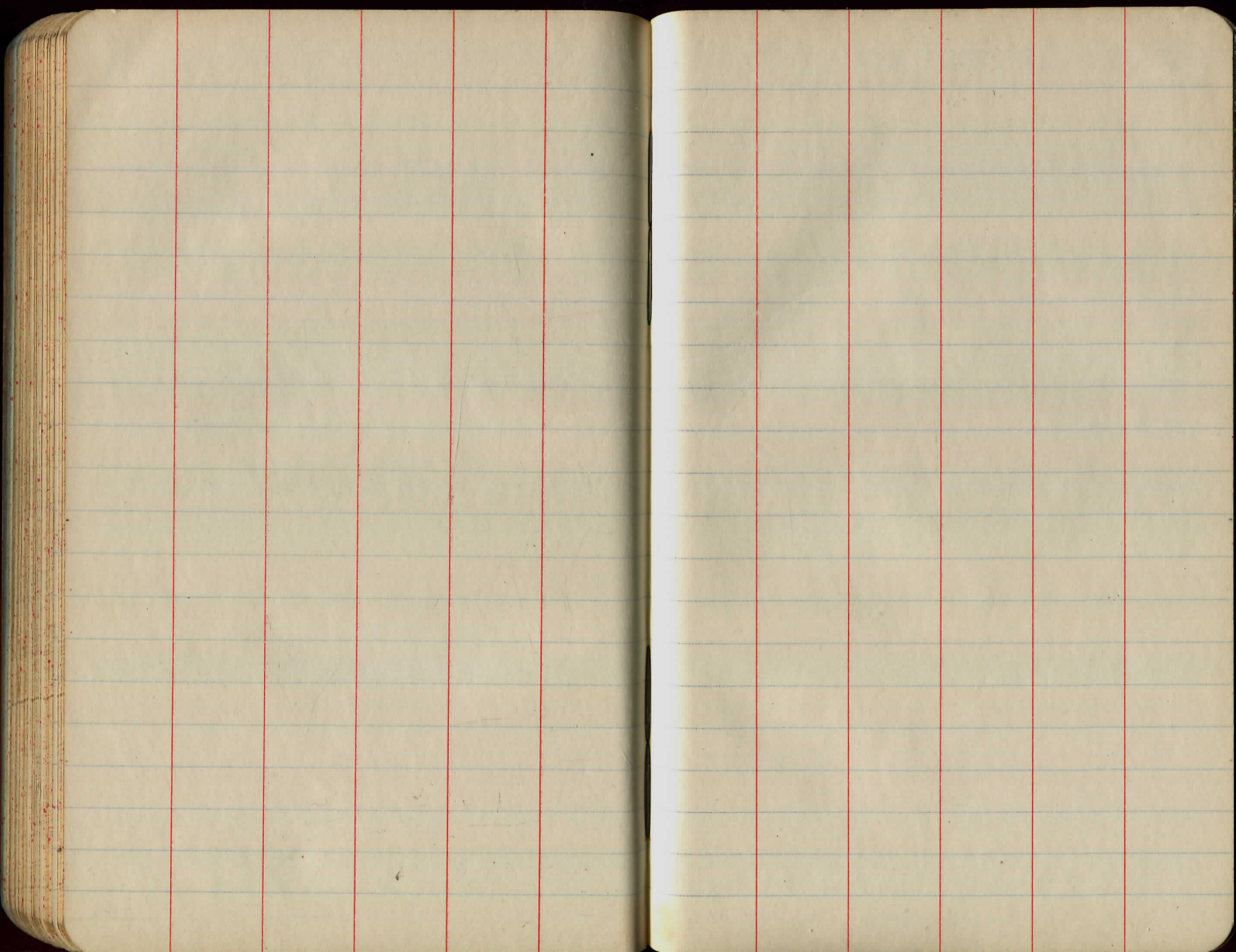


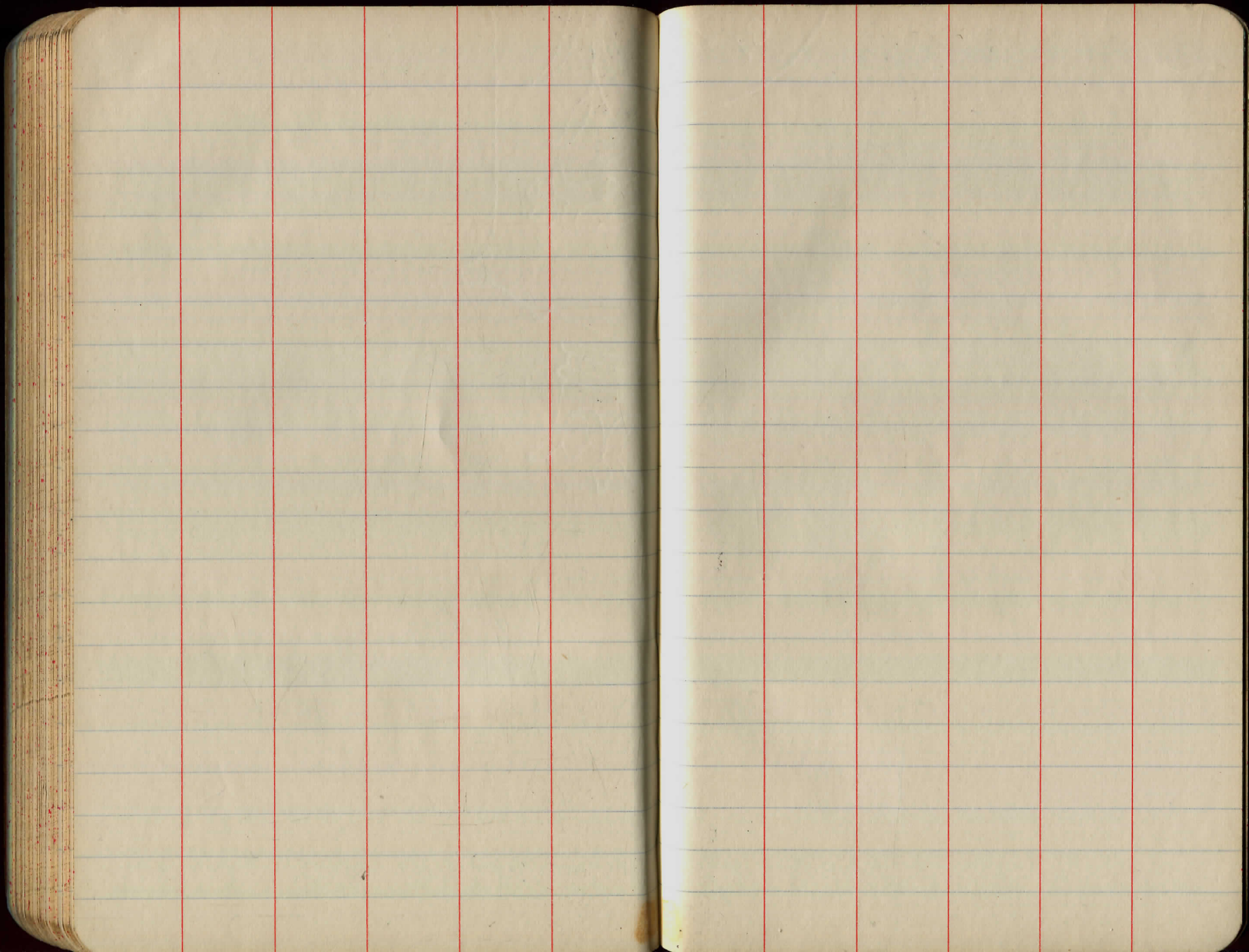


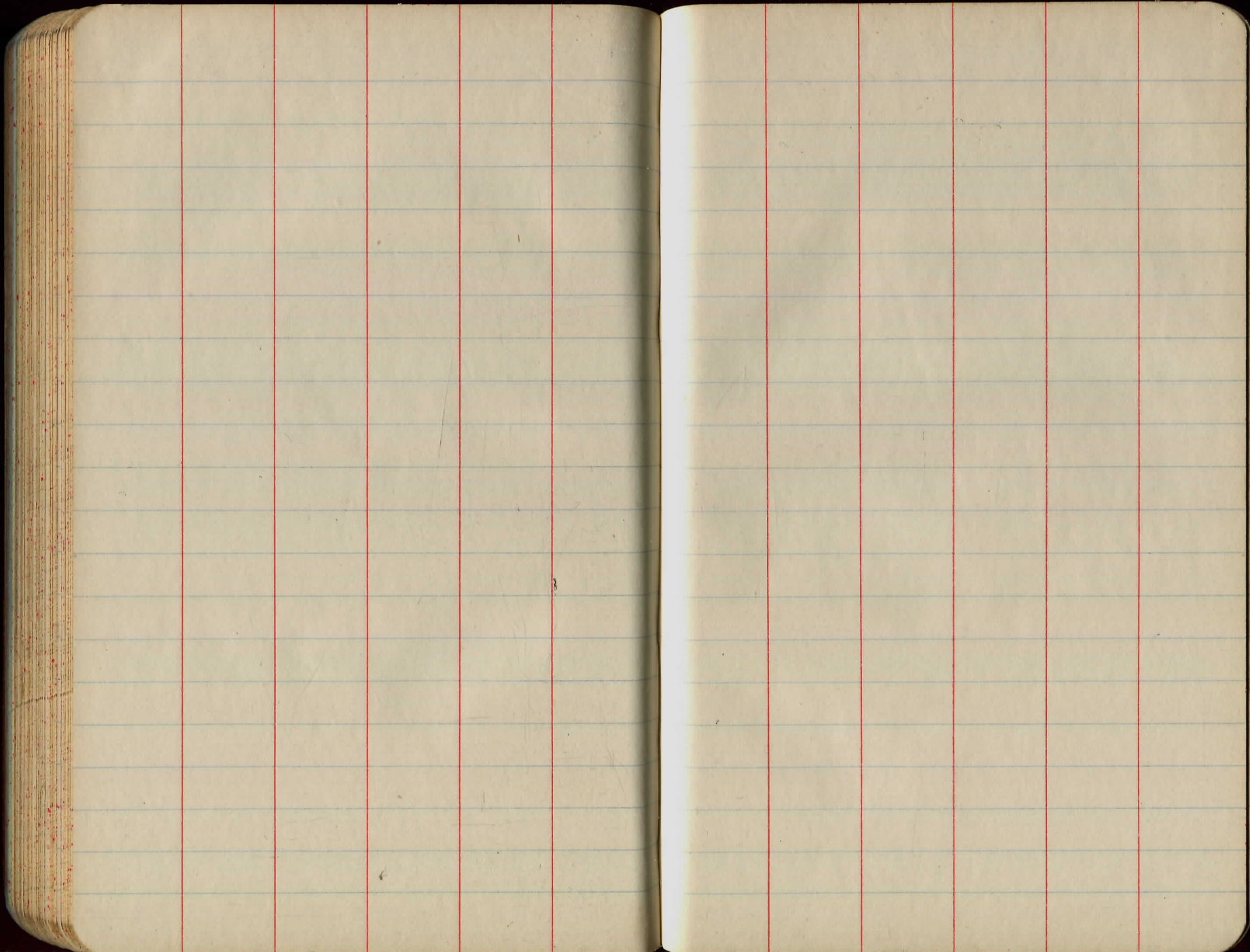


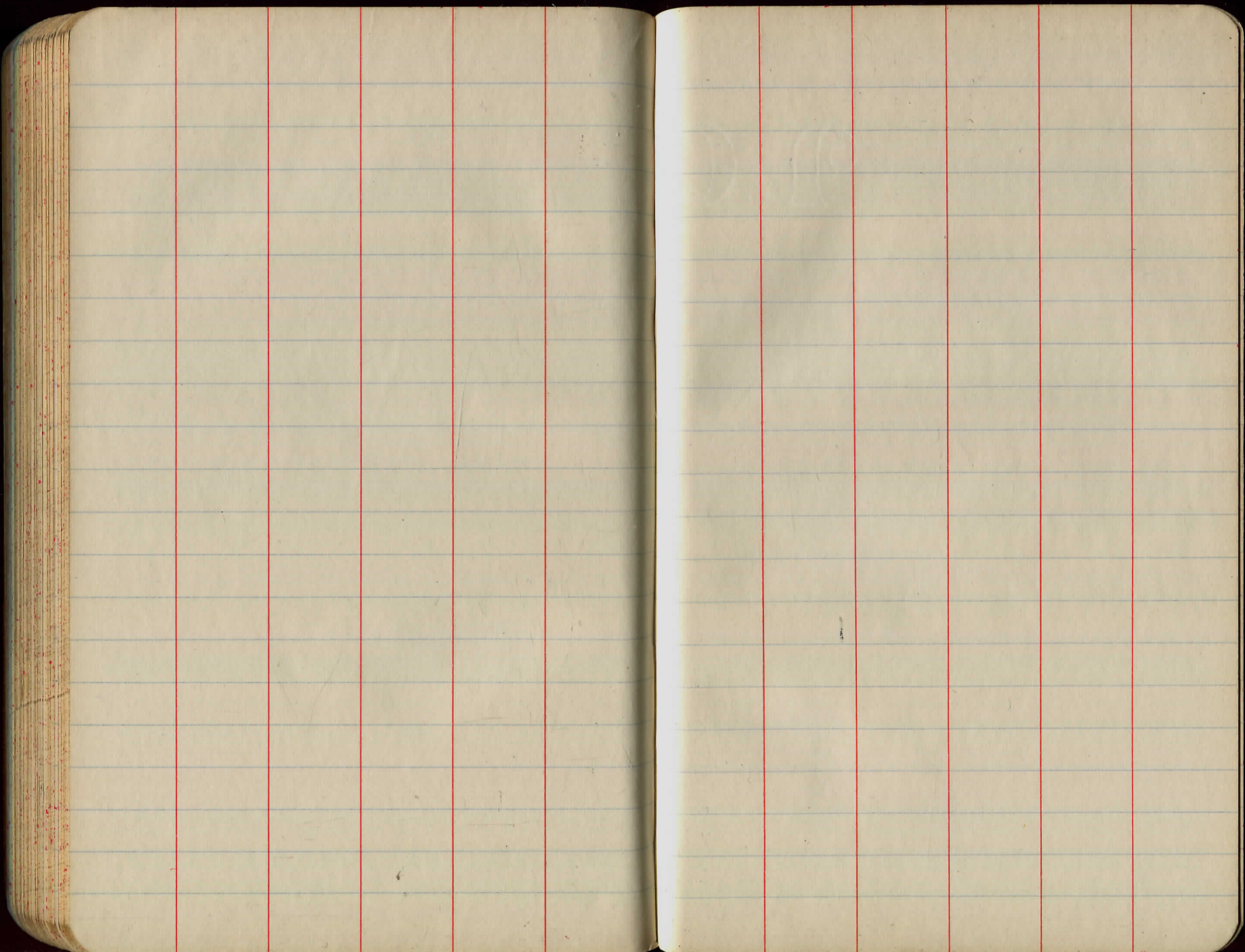


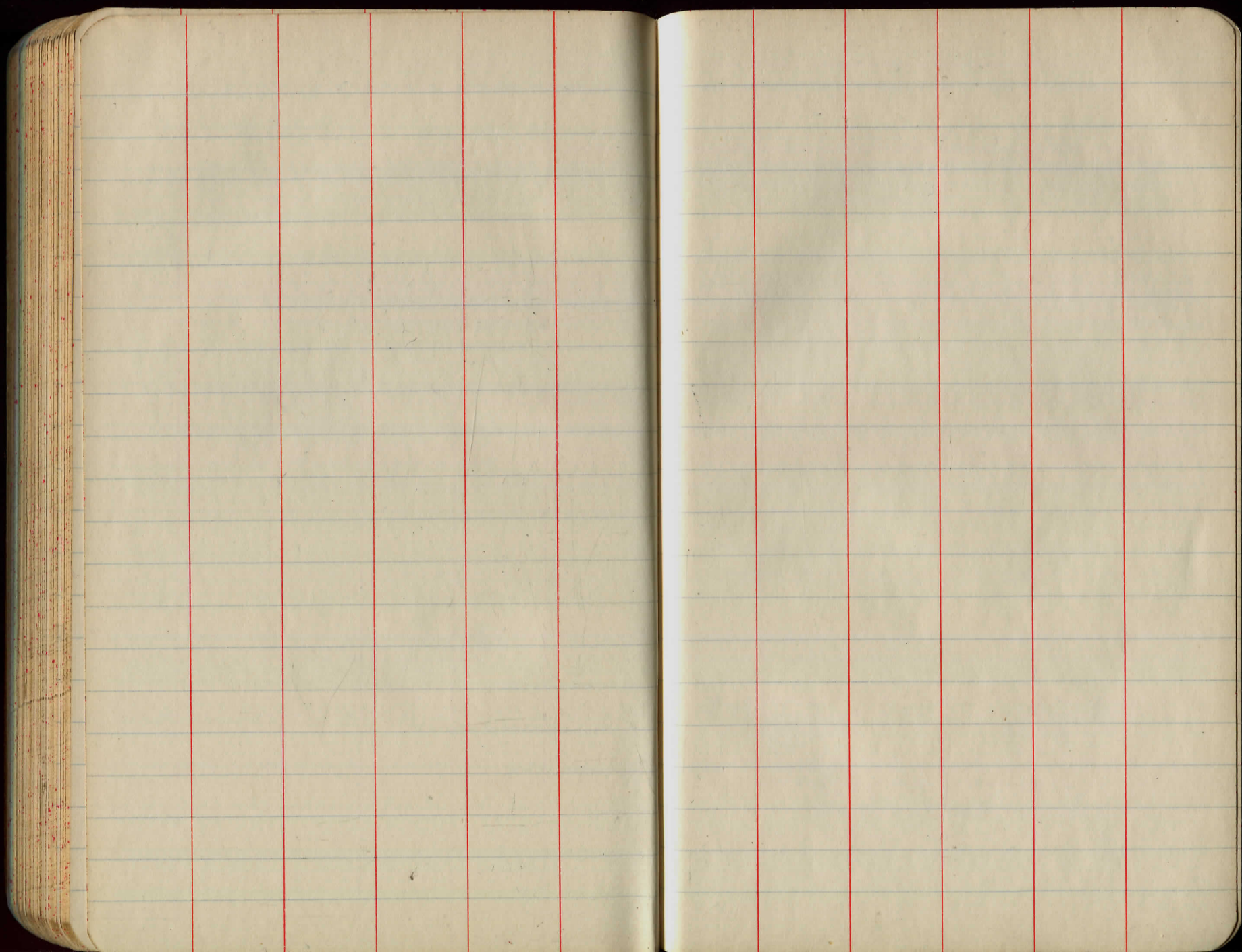


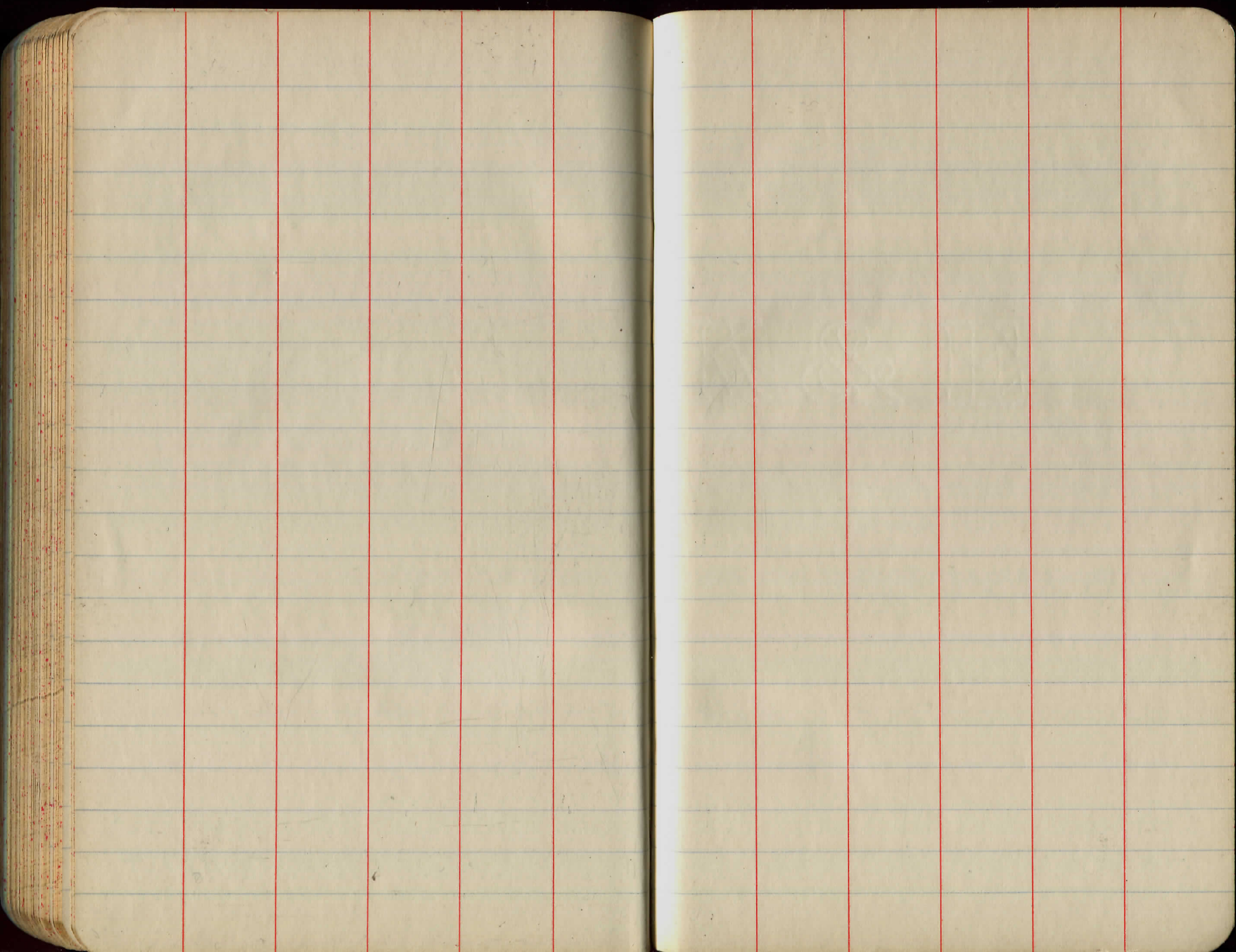


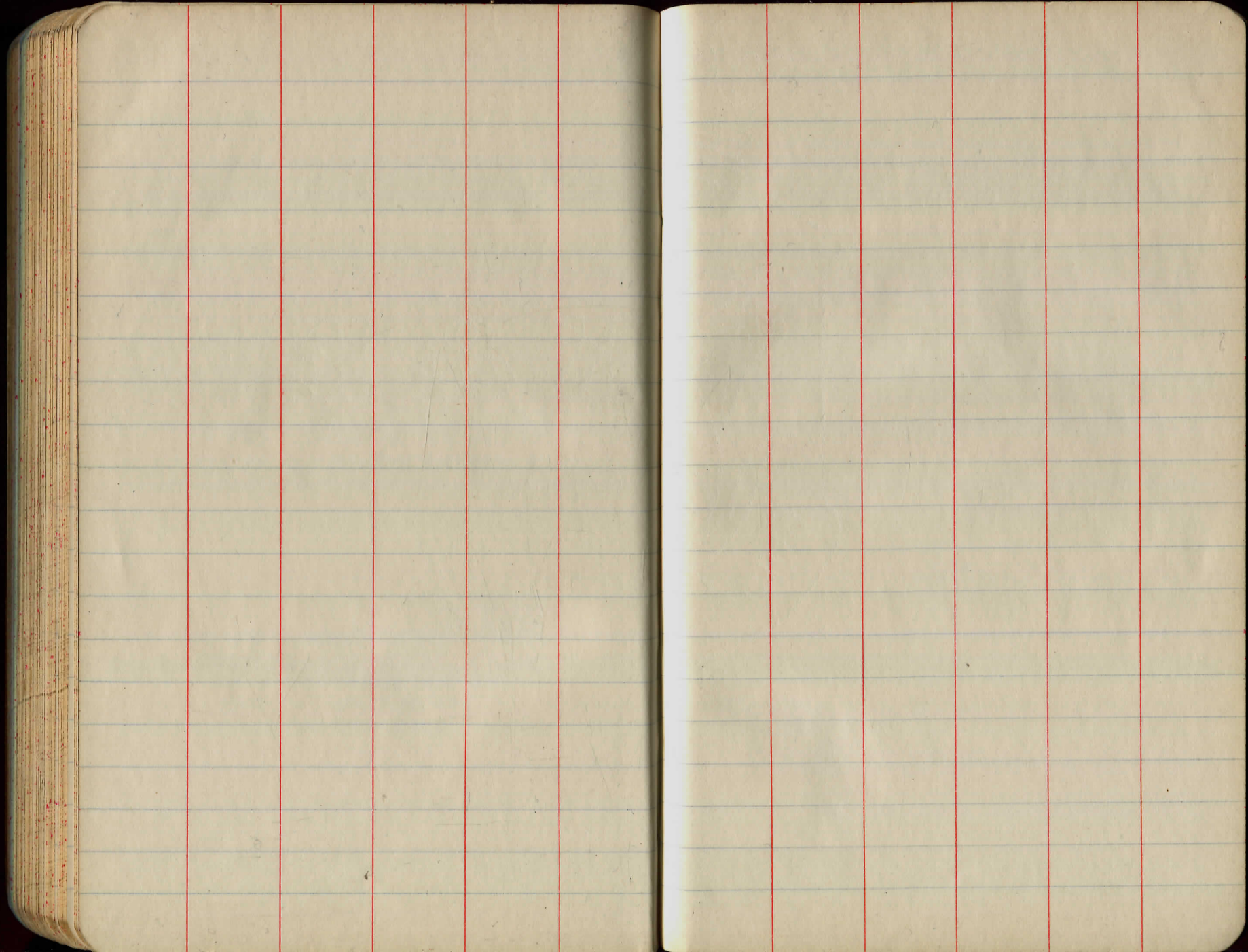


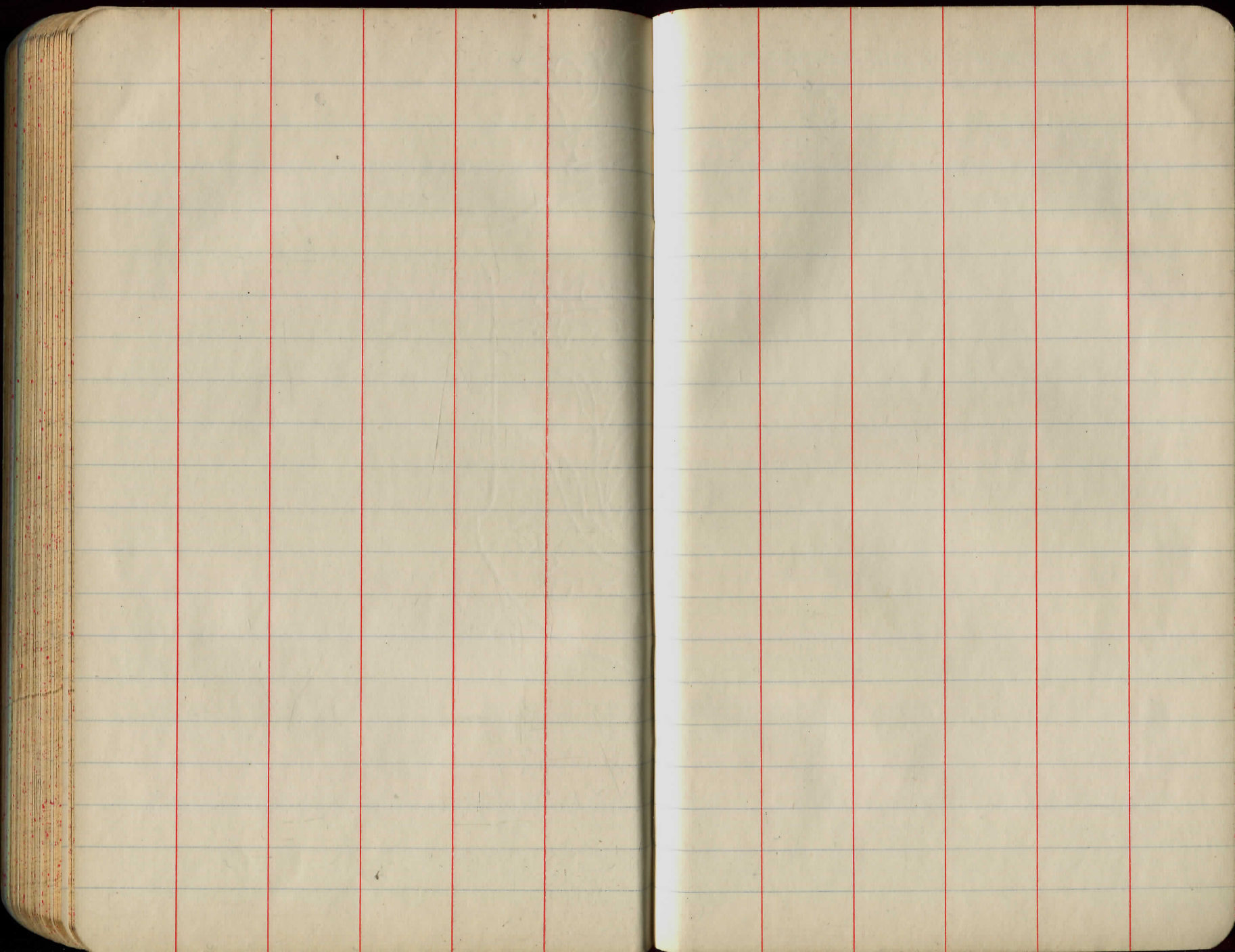


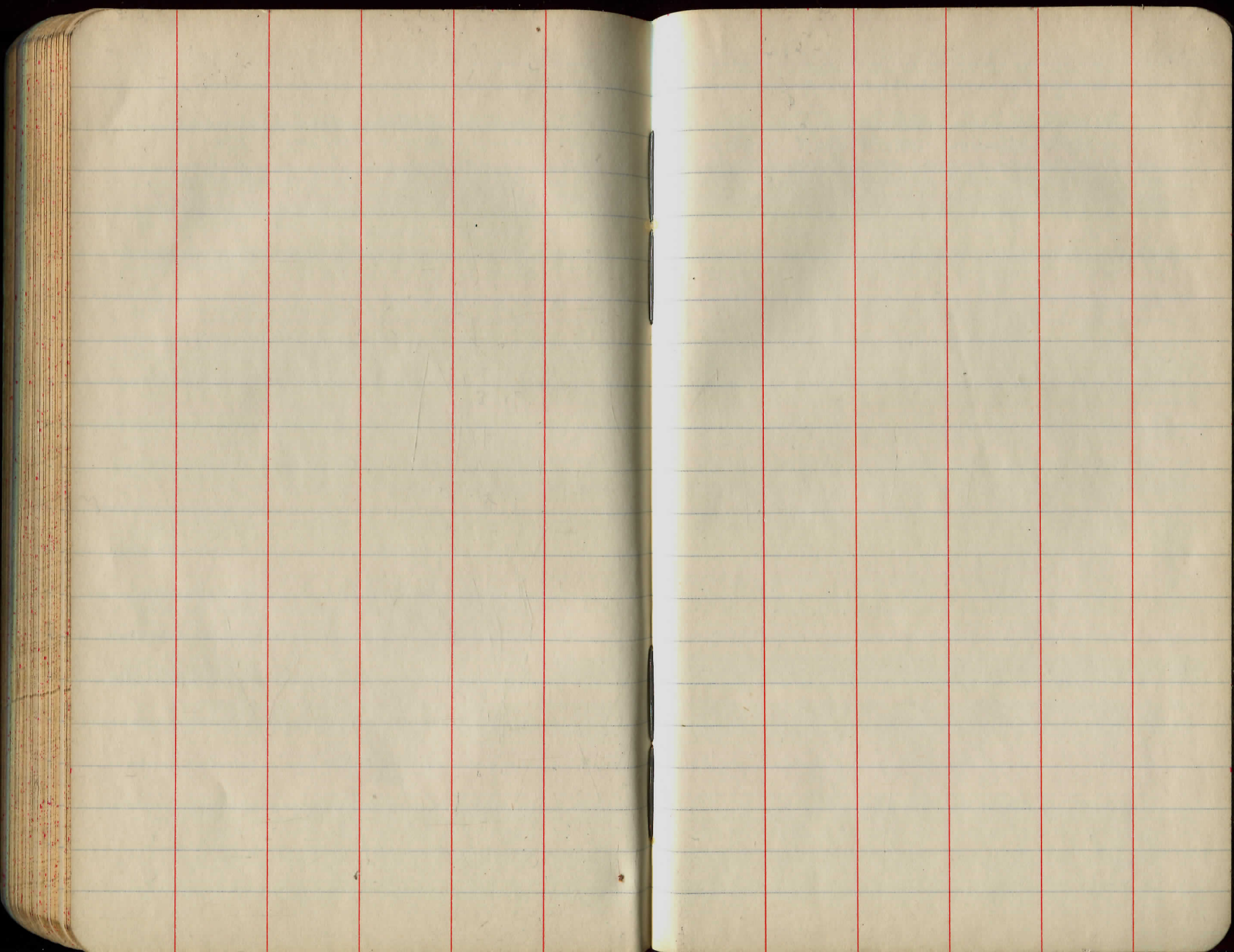


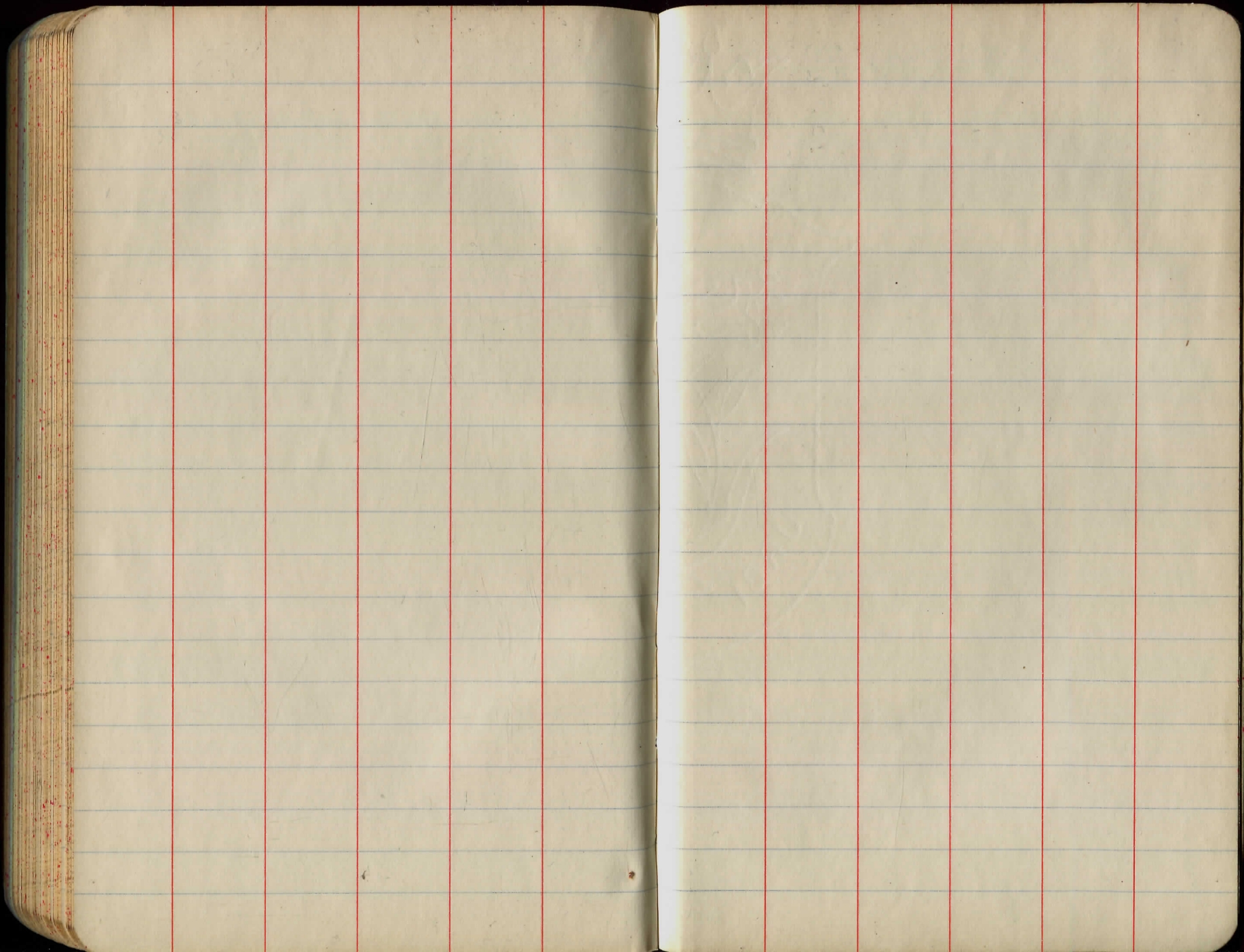


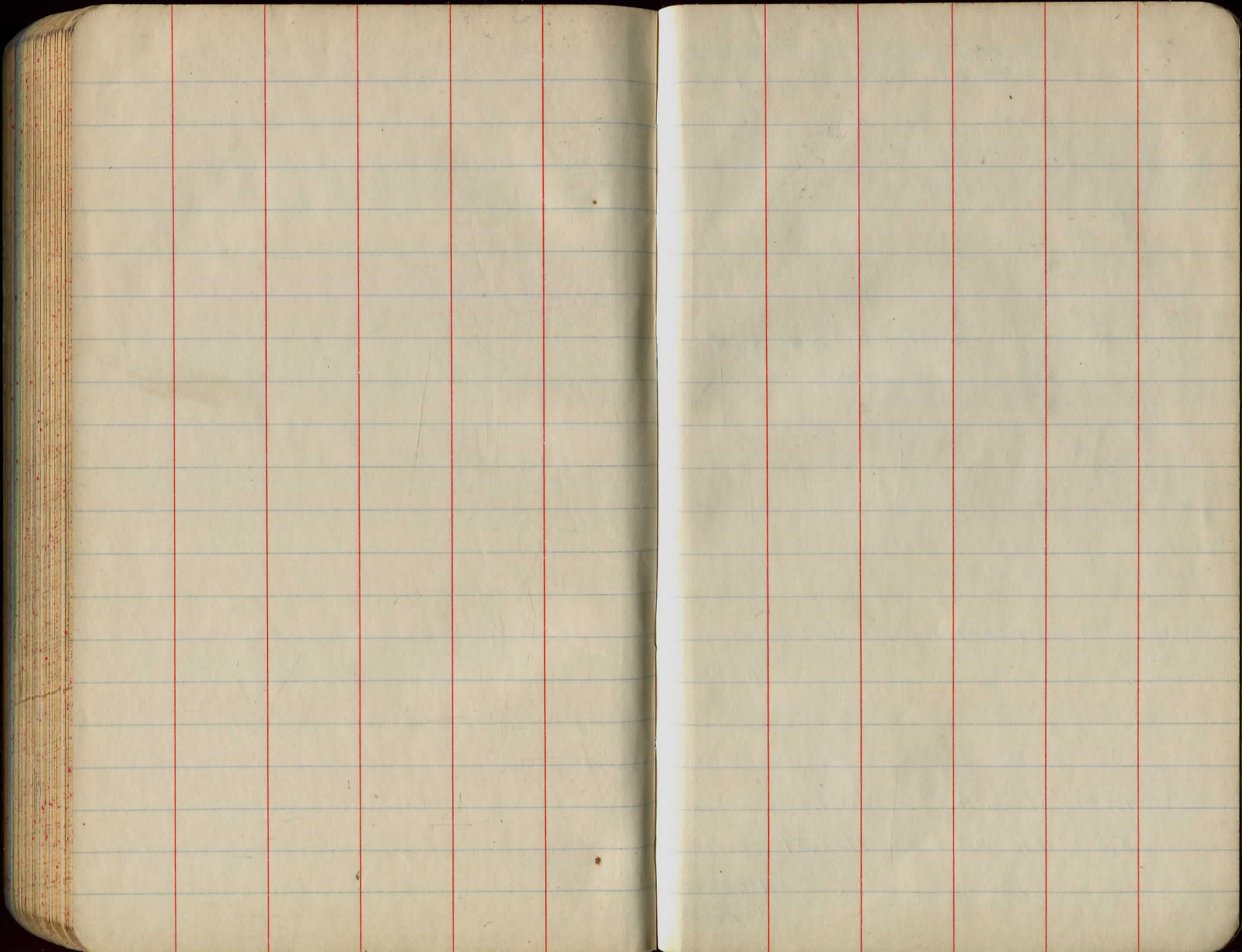






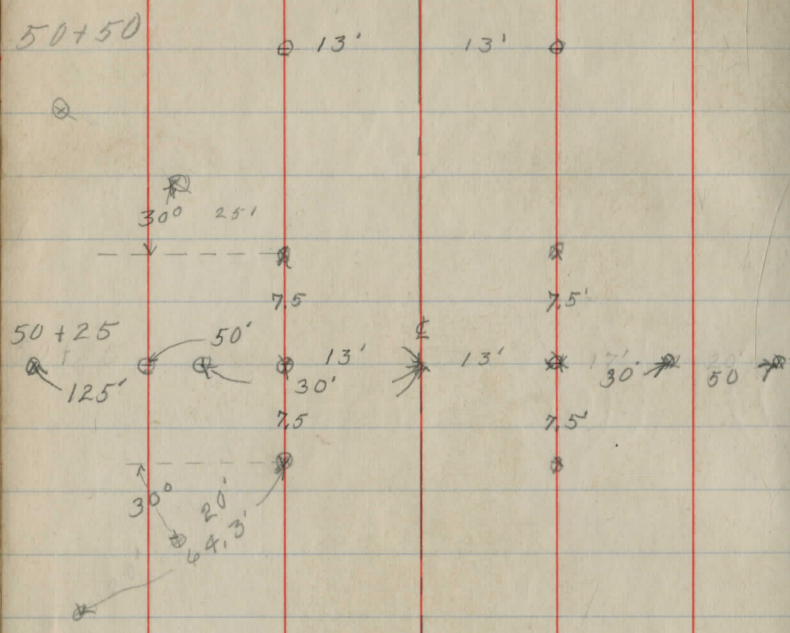






Aug. 8, 1930.
 70° Cloudy Forenoon
 { Clear Afternoon

W. C. Marks
 E. Belding
 D. Parks
 R. H. Goss



94 150'

50+00 13' 13'

B.M. 3.37 1162.47 1159.10

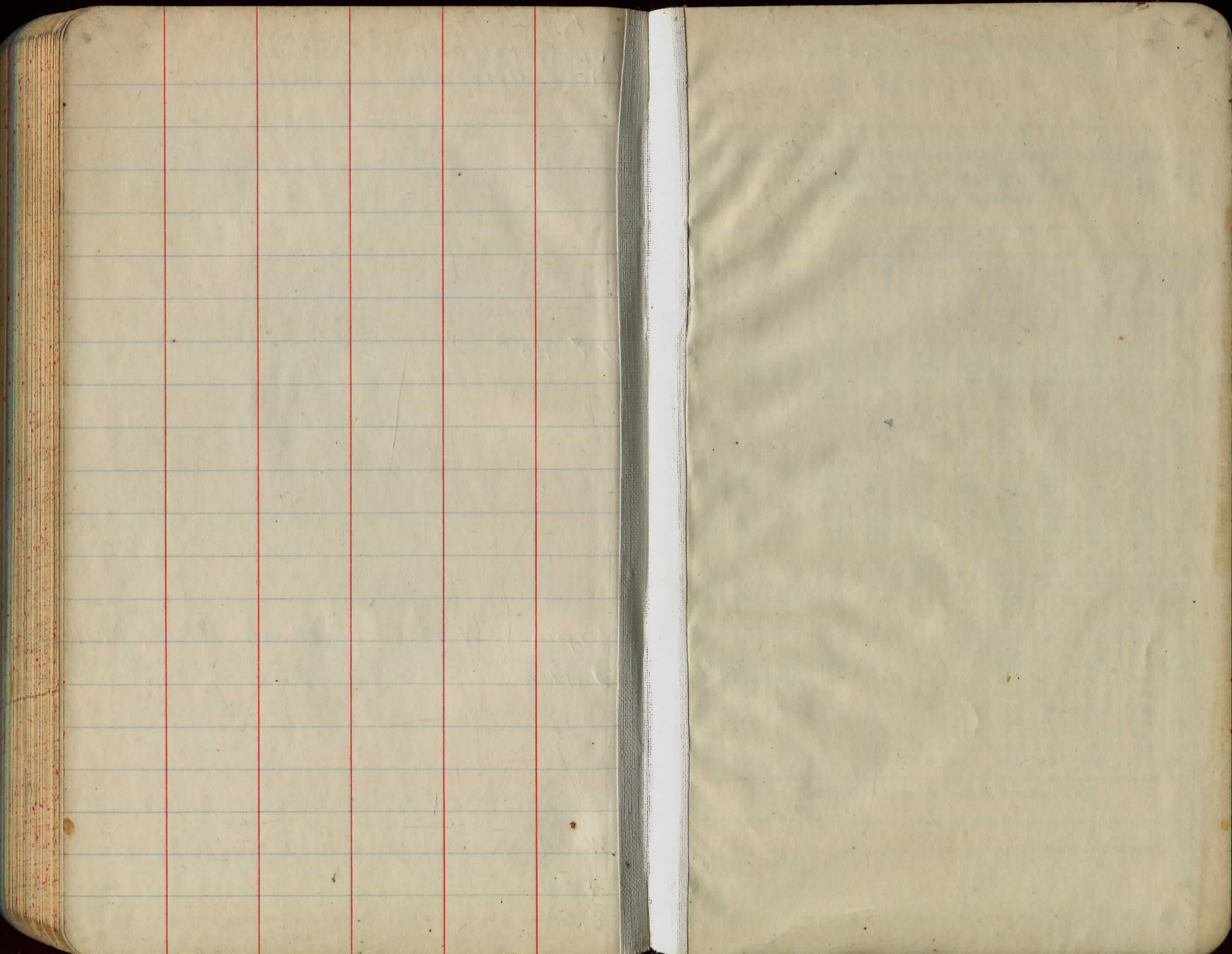
Spike W. root 15" Birch Pt. Sta 49.57
 3.97

B.M 4.64 1163.74 1159.10

5.53 1163.04 6.23 1157.51

1158.50
 1154.50

4.54
 8.54



DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1 1/2 TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

MADE IN GERMANY.
R.

