

W  
377

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.  
 Roadway 16 feet wide. Side Slopes 1 on 1.  
 For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be  $30.6 + (20 - 16) \div 2$  or 2 ft. added to  $30.6 = 32.6$ . For slopes of 1 on 1 1/2 see inside of back cover.  
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DISTA

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40

to be  
of rot  
exam  
30.6

Basin Clearing Record  
Wood cutting and hauling

P.P.C

DIST

Sept. 13 '32

Load

Cords

Reed S-W 1/4 of S-W 1/4 sect

.75

Reiniger S-E 1/4 " " "

Arnold Gravel bar

1.50

H

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

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23

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28

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31

32

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35

36

37

38

39

40

to b  
of rd  
exan  
30.6

Sept. 14 - 32

DIST

Recd

Reiniger

Arnold

Shields 3-2/4

Sec. 9

Load

Cards

}

.75

.50

2.00

H

0

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of re  
exan  
30.6

Sept. 15 - 32

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40

Red

Reiniger }

Arndd

Load

1

1

Cord

.25

.50

to b  
of ro  
exan  
30.6

DIST.

Sept. 16-32

Logd

Cords

4

Reel

H

Reiniger

- 0
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to b  
of rd  
exan  
30.6

DIST

sept. 17-32

shields

Lead

101

5  
Cards

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to h  
of r  
exa  
30.6



DIST

Sept-18-32

Indian Balthazar

load

Cords

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1

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39

40

to 1  
of r  
exa  
30.6

Sept. 19-32

Reel

Reiniger } cutting only - felled

one tree across road.

cleared passage by 3:30 pm

Sept. 20-32

8

loads

cords

Reel

Reiniger }

Hayden

1 indian cutting

Arnold

1

.50

1

.25

1

.50

Sept. 21-32

no cutting except indians

three inquiries

road thru damsite ordered closed

Wily 15 beginning on cutting Alder <sup>24' long</sup> trees

to use as logs for cabin on his land

for future lakeside campers; he

complains about road alignment as

built by city from Hiway 20

Sept. 22 -32

10

Hayden

Shields

Hayden: 3 men cutting

loads

2

1

loads

2.0

1.0

Sept. 23-32

Reel  
Reiniger }

Belloti has 3 men cutting  
Hayden has cut a tree inside  
the indians field and smashed  
the fence which made the  
indian mad - told me to get  
out of the "reservation" with  
my wood cutters.

loads

11  
cords

1

1/2

Sept. 24-32

7 Boldoti has 3 men cutting  
no hauling

7 Wiley has 4 men cutting  
a truck went up the valley  
may haul indian cut wood  
had not returned 4 pm

Sept. 29-32

Belotte has one man cutting

Wiley has 5 men cutting



Sept 26-32  
wiley 5 men cutting

14  
Sept. 27-32  
wiley 5 men cutting

Sept 28 '32

Wiley 5 men cutting

Porter 3 " "

15  
Sept. 29 '32

Wiley 5 men cutting

porter 3 " "

Sept 30 - 32

Wiley 5 men cutting  
Porter 3 " " "  
E.D. Williams? touring car  
with trailer hauled 1/4 cord

16  
Oct. 1 - 32

Wiley 5 men cutting hauled on lead  
oakwood - he has moved in a  
power saw - is cutting Alder  
and is making a new crossing of  
Chocoma creek below fork

Porter 3 men cutting

Galilee had 5 men with trim looking over  
the ground - will try for a permit  
to haul thru dam site Wiley road  
impossible to stack

Indian cut wood went out 2 trucks

Oct. 3 - 32

Wiley 5 men cutting - road making  
Bellotti 1 man cutting  
Reel  
Reiniger hauling  
Hayden  
C.L. Hellman 3228 Gregory has permit from  
Salvation Army  
Carlson 3 men cutting  
Ogelsbee 2 men cutting  
Porter 3 men ?

17  
Oct. 4 - 32

- ditto  
- not cutting  
- "  
- "  
- "  
- "  
- will haul out 1/2 cord  
- 2 men cutting  
- 3 " ?

Wilson came out to cut some sample  
wood

Oct. 5 - 32

Wiley 5 men cutting he is getting a lot  
of wood ready

Porter 3 men

Carlson 3 "

Oglesbee 1 "

Cramer he has difficulty's Indian rancher  
want let him cut any trees, only on  
the west side of river not much over there

1 load (1 cord)

Oct. 6 - 32

Wiley has 5 men cutting

Porter will haul tomorrow

Oglesbee, 1 men cutting

Oct. 7 - 32

Wiley has 5 men cutting  
Porter hauled about 1 cord  
Oglesbee is hauling to river  
bank and has 2 men  
cutting

19  
Oct. 8 -

Indians wood moved out

Oct. 9 '32

### Flood data

Flood reached gravel pit x-sing by 11 a.m.  
running about 100 soft 80' W x 4' d v. 3-5  
in one hour no noticeable raise or recession  
by 12 p.m. road x-sing topped west of s.p.  
the 24" pipe was at maximum discharging und. s' head  
2:20 40' section of easterly x-sing went out  
filling pond between next downstream x-sing  
and topped road by 2:25 - 2:45 second  
x-sing went out - First water entered  
Tunnel 2:57 p.m. about 3:05 water  
passed thro former drain pipe into hole  
upstream of toe wall upstream

70  
Oct. 10 -

The ponding caused by bench in tunnel  
reached to about 900 feet above west x-sing  
11. am river flow at point above gravel borrow pit  
where observation was made Oct. 9 = 1 soft. ±  
contractor is repairing east x-sing with  
gravel pit dragline / Bulldozer is making  
road on north bank between 1st and 2nd  
x-sing for all above H.W. -  
gravel washing plant idle - road x-sing impassable

Oct. 12 - 32

7.60

gaging station on S.D. River

	0.00	10.00	10.00	H.I. assumed cl.	3.5 200' feet downstream ♀ K.S.	6.88 6.63 6.52	.72 .97 .49	} 2.92 S = .00425
S. Bank 0+21		0.0	10.00					
0+40		2.8	7.2		3.5 200' upstream	5.37	2.23	
0+52		5.9	4.1		♀	5.02	2.58	
0+64		4.6	5.4		K.S.	5.15	2.45	
0+90		6.9	3.1					} 2.42 S = .00425 4.07 : 400 ( = S = 0.0175 6.15 2.08 200' up 200' down 3.85 7.92 P09
0+96		8.4	1.6		Chocotate Creek B.S. 10.00	10.00	H.I.	
1+30		8.35	1.65		0+80	0.4	9.6	
1+50		8.45	1.55		0+70	4.0	6.0	
1+80		8.7	1.3		0+65	5.6	4.4	
2+09		8.3	1.2		0+58	5.8	4.2	
2+20		6.0	4.0		0+53	6.2	3.8	
2+28		0.0	10.00		0+47	5.9	4.1	
Oct. 9 - (12.9 m)		7.83	2.17	H.X.M.	0+40	5.9	4.1	
	5.46	7.60	7.26	2.14	0+23	6.3	3.7	
					0+18	5.83	4.17	
					0+10	4.4	5.0	
					0+08	2.6	7.4	
						1.0	8.4	



Oct. 13 - 32 28 14

Wiley cutting 3 men  
Belotti " 1 m  
Oglesbee " 3 men  
Creamer " 3 " load 1- cord

22  
Oct. 15 - 32

set streamgages in S.D. & Choc. channel  
Wiley cutting with 3 men  
Shields deer hunting  
Oglesbee 3 men cutting  
Belotti 1 man "  
Creamer 2 " "

L 2330 red truck 3 men 1 load  
from river flat - old cutting

Oct. 17 - 32

Wiley 3 men cutting & sawing  
with power saw  
Boletti 1 " "  
Shield 3 " cutting hauled 2-cord  
Oglesbee 3 " " " 1-cord  
Cramer

McAusland picking olives

23

Oct 18 - 32

Wiley 3 men cutting and running  
power saw

Oglesbee 3 men cutting rigging  
up a power saw on truck

Boletti 1 men cutting

McAusland picking olives

Wood contractor asked for his  
location -

Oct. 19 - 32 & 20

Wiley 3-man cutting & sawing  
 B Oglesbee 3 " "  
 S. Boletti 1 " "  
 O. Shields 3 " " 1-cord  
 C Creamer 3 " " 2 "  
 Indians

shields made connection to  
 contractor road this side of  
 chocolate creek from old road

Oct. 21 - 32

Saben car 842989 1/2 cord  
 Wiley 3-man sawing  
 Oglesbee 3 " cutting  
 Boletti 1 " "  
 Shields 3 " " 1-cord  
 Creamer 3 " " 1 cord  
 City Contr. 2 " "

new pump tried out pond w.s. 5.73 pump base  
 5.5' higher  
 low place in north end of levee 5.74.5

Oct. 22

Wiley 3 men cutting & sawing  
Bolette 1 " "  
Shields 3 " " 1 - cord  
Creamer 3 " "  
city center not working

contractor closed road made by  
Shields

25  
Oct. 23 - Sunday

on Sat. about 3:30 pm met the  
two young men - working the Hayden  
allotment - near the old gravel pit & being  
heading for town - on seeing only two  
pieces of wood on the truck (a small model-T-  
ford) on asking they said: that a tree  
- which they had some time ago attempted to  
fall - could not get on the ground  
they had cut thru but could not get  
it to fall, so they left it for some later  
time, as it was near quitting time and  
I had made about 12 miles of foot  
I did not verify the condition, only to  
find that the tree fell across the  
road that same evening and nearly  
trapped a passing car - to avoid re-  
currence of this they must loose permit

Oct. 24-32

Wiley has moved several cords the  
last week impossible to check up

Shields 3 men cutting

Creamer 3 " " 1 cord

Bolatti 1 " "

Indians moved about 4 " <sup>all</sup> week

Oglesbee 2 men cutting & sawing with P.S.

Ford pickup 8Z 9822 hauled Oglesbee  
Lis. <sup>WOOD</sup>

Rosa E. Kals 2735 Hornblend Pac. Beach

26

Oct. 25-32

Wiley - cutting sawing hauling

Oglesbee Cutting

Shields " 2 - cords

Creamer " 1 - "

Bolatti "

City Corp. 2

Oct. 26-32

Wiley	2	cutting - sawing hauling	
City Contr.	2	"	
Oglesbee	3	"	returned from town no work yesterday
Botelli	1	"	
Shields	3	"	1 cord
Creamer	3	"	1 cord

27  
Oct. 27-32

Wiley	2	cutting sawing hauling	
Oglesbee	3	"	"
City Contr.	3	"	"
Botelli	1	"	"
Shields	3	"	1
Creamer	3	"	1
Indiana			2

Oct. 28-32

Wiley 3 men cutting sawy hauling

Cit. Contr 3 " "

Boletti 1 " "

Oglesbee 3 " "

Shields 3 " " 1-

Creamer 3 " " 1-

Carlson moved out

Bench 3 men came out to camp  
at Henderson place and get  
about 1-c - 1 man cut himself  
with saw

Cit contr brought out a p. saw

28

Oct 29-32

Wiley 3 cutting sawing

city contr 3 men "

Boletti 1 " "

Oglesbee 3 " "

Shields 3 " " 1-c

Creamer 3 " " 1-c

Oct. 31 - 32

Wiley 3 men cutting

city contra 3 " accepted \* pile area 48' 8"

(same as below)

W #1  $W = 90^\circ L = 90' = 1220$  - #2  $W = 50'$

#2  $W = 86^\circ L = 192' = 323$  c

Oglesbee 3 men cutting

Boletti 1 "

Shields 3 "

Creamer " "

Reiniger 2 "

road thru dam being closed to  
every body none is hauling

Accepted contract Wood

same as above

#1  $48 \times 90 \times 90 = 388800$

#2  $50 \times 86 \times 192 = 825600$

22184) 1214400 (5.49 ✓  
1105920  
1084800  
88486  
2006640

Nov. 1 - 32

Wiley 3 men cutting

city contra 3 " "

Boletti 1 " "

Oglesbee 3 " "

Shields 3 " "

Creamer 3 " "

city bonded 2 1/2 cords thru contractor trucking

1-truck 3 men



Nov. 2 - 32

Wiley 3 men cutting & sawing

City contr. 3 " " "

Boletti 1 " "

Oglesbee 1 " "

Creamer 3 " "

Spields 3 " "

Indians cutting - hauling 1 - c

Nov. 3 - 32

same as 2nd

Indians cutting and hauling lots  
about 5 trucks went out

Boletti not cutting

City contr. has a poor sawing

very dangerous.

Nov. 4-32

city contractor accepted in forenoon the follow

#3 50x50x105 = 241720 <sup>262500</sup>

#4 50x42x16 = 33600

#5 48x98x51 = 239904

#6 48x98x16 = 75264

#7 48x32x102 = 156672

#8 38x48x16 = 29184

221184 ) 776544 (3.6) ✓  
798044  
663552  
1129920  
1105920  
239500

city has hauled previous accepted  
and hauled today's partly.  
All others as before

Nov. 5-32

city contractor finished and city accepted:

#9 50x48x106 = 254400

#10 16x48x100 = 76800

#11 16x38x80 = 49600

#12 16x48x110 = 84480

#13 16x48x72 = 55296

519636 2.3  
531776 (2.4 cords)  
442368  
894080  
884736  
93440

NOV. 7 - 32

Wiley hauling

City Center began near Res. line chard.  
1 truck - 3 mm - city hauled last wood along road  
Oglesbee not cutting - sawing some b.w. wire

Shields 3 ~

Creamer 3 ~

Mosier 3 ~

R. Barber 3000 Bstr. 3 ~ hauled in two touring cars

3 cars on flat

Nov. 8 - 32

as above

Nov. 9 - 32

same as 8th

Derm contractor put barrier  
on road near gravel plant

Nov. 10 - 32

Wiley

City contr.

Oglesbee

Mosier

Creaner

Shields

} all cutting

Nov. 11 -

same as above

Hill & G. Williams went thru  
basin

Nov. 12 - 32

same as 11th

B. Wells and assistant looked over  
wood supply source for Cent. camp  
decided to purchase wood from individuals

N 13 -

N 14 -

Wiley 4 - cutting

City con. 5 "

Oglesbee 1 "

Mosier 3 "

Creaner 3 "

Shields -

Dam Contractor has lock on gate but  
found it open - found one man  
camping on gravel bar

Nov. 15 - 32

Wiley 3 - cutting - mostly Alder  
Oglesbee 1  
Mosier 3  
Creaner 4

1 - c

Shields report is out that Shields  
has entire contract for Dam contr.

of 200 c - supposed to be \$5 for willow

\$6 for cat. size \$10 for oak

city contr. accepted today

#14  $140 \times 48 \times 230 = 1545600$

#15  $32 \times 48 \times 102 = 156672$

#16  $221184$  )  $1702272$  ( 7.7 c

#17  $16 \times 48 \times 96 = 73728 = 0.33$

2:20 pm cont. seeds two <sup>8.03</sup> trucks

one driver each no helpers

one trip each

#18  $48 \times 16 \times 148 = 113664, .5$

34

Nov. 16 -

All others as 15th

city contr. finished in draw - is now cutting  
row of olive trees along road

Dam contractor is hauling with one

truck begins moon 1 - load only  
1 - truck - 1 - man

Nov. 17-32

Wiley - 3 men cutting W. states he has  
cut about 14 c. Baily - cutting on Wiley  
about 25 c. - what to Salvation army?  
City contr<sup>3 men</sup> accepted. Silver wood

#19 48 x 120 x 48 = 276480 @ 1.25 c

order stopping all cutting made known

truck hauling city wood 12:00 pm to 2:30 2 men  
1 truck

truck on 16th broke down gate post of  
Indian yard and contr. foreman viewed damage  
today should be repaired by contractor

Nov. 18 -

all as before

Darn contr. let wood contracts

" " repaired Indian gate

" " hauled city wood - not complete

city hauled loads to Henderson place

city contr. states H.N.S. refused increase

in contract price

Nov. 19-32

All as before

W Burt, the clearing crew foreman  
is on the job today  
went over the work with him & H.W.

36  
Nov. 21-32

Started city Basin clearing crew

11-men 1-Foreman-tractor arrived  
by noon and driver worked as  
before on city time. 1/2 day-tractor  
not operated

split crew and 6 men cleaned  
Chocolate creek towards forks

5 men started to gather floating  
logs in pond should have a boat  
for that purpose to slow & costly

NOV. 22 - 32

14 men 1 Foreman 1 tractor  
worked tractor all day in area 1  
7 men cleaned chocolate creek  
upstream Wiley ordered to  
stop falling.

7 men cleaned in area 1

Nov. 23 - 32

16 men 1 Foreman 1 tractor  
worked all day with 7 men in  
area 1

9 men cleaned chocolate  
to 100 yds above forks.  
and partly near mouth of  
creek joining tractor crew

NOV. 25 - 32 <sup>Ed 27</sup>

16 men 1 Foreman 1 tractor worked  
all day with 7 men on gravel  
bar - 9 men crews cleaned rim  
channel below Res. line

Nov. 28 - 32

13 men 1 foreman 1 tractor  
14 " in afternoon  
City wood contractor turned in

$$47.0 \quad 101 \times 100 \times 47 = 474700$$

$$42.1 \quad 119 \times 92 \times 48 = 657984$$

$$221184 \quad 1132684 = 5.1$$



Nov. 30 - 32

City wood contractor turned over  
the following

192 x 48 x 48 =

Shields has brought power saw  
on gravel flat and is cutting  
for dam contractor dry wood

Dec. 2 - 32

city cont. not cutting - his contract  
about finished

Dec. 5 - 32

accepted from city contractor

422 48 x 192 x 48 = 442,368 = 2. C.

423 98 x 16 x 24 = 37,632

424 48 x 32 x 198 = 296,448

221,184	776,448	3.5 ✓
	663,852	
	1,128,960	
	1,165,920	

total  
29.87 cents  
5000

entire crew burning in chocolate  
used 1 drum oil - need filling tomorrow

Dec. 6 - 32

18 men + foreman in area 1-23  
all burning - went to Stanley  
for paychecks for laborers  
with Williams driving, found  
shortage in Bork's pay is to  
be adjusted on 15th  
Wiley has been permitted to  
cut again by Mr Wood  
Shield's outfit sick with flu  
since Dec. 28 -

Dec. 7 -

Burning up to res. line by 2pm  
18 men 1 foreman (16 daytime 2 night)  
weather cloudy 9am sunny PM  
river running 2 soft  
caterpillar worked 1 hr

39  
Dec. 8 - 32

city contractor has to be forced  
to deliver his wood the hermit stopped  
trucks from hauling  
18 men and foreman  
visit Pyle-Dri Russo-Anderson-Connelly  
hailed two loads of city wood

Dec. 8 - 32

Raining by 8 am.

7 men piling in south fork 5 burning in area 5  
tractor and 3 men in area 4-3-7 back piling  
2 men night gauling  
spiggest for barrels weeded  
shield outfit hauled out broken  
down logde truck not  
moving any wood no one is  
so far this month.

Dec. 10 to heavy rain  
foreman and 1 man on road  
1/2 day

river running 2.5 cfs

Dec. 11 raining

Dec. 12 raining

road is passable but dangerous  
boat has been wrecked by  
contractors crew

all crossing to contractor  
out

river at 11 am gage 1.1

2 pm 1.3

chocolate 7 am 0.8

2 pm 0.4

Max. discharge 32.5 cfs

Dec. 13

raining Dec. 14. no work - McKinney 1/2 day

Dec. 15 8 men 1/2 on road 1/2 day clearing

Dec. all clearing

Dec. 17 all clearing

Dec. 18

Dec. 16 4 men on road all others  
clearing

Dec. 17 4 men on road all others  
clearing

Dec. 18 4 men on road last day  
all others on clearing

Dec. 19 2 men working Henderson place  
all others clearing

724097 Buick

Dec. 19-32

met a truck belonging  
to Hixson contr. coming  
for gravel to city contractor  
plant - road xsing was fixed  
up by dam contractors crew  
and xsing is now passable

Dec 20

There are 4 drums of oil  
and 1 of gas at gravel plant  
took one of oil this morning  
to B. Mann for burning  
Standard truck came at 2pm  
to gas up tractor haul to be  
pulled thru river.

Henderson plane about pulled  
down to one room-cabin  
Eglesbee then after his lumber  
which he is hauling to Tolson ranch

Dec. 21

about 3:30 pm rain fell  
river about 10 scft.

Dec. 22

clear cloudy pm. river about  
maximum at 3:30 pm 40 scft  
moved last 2 drums from  
gravel plant -

Dec. 23 -

Finished at old Henderson plane  
started with some men to put  
headwall around culvert at  
Wiley's sta. that will take two  
days at least.

all others burning - no oil come yet.

Dec. 25 last day in the  
basin, returning to eng. crew  
at dam site. P.D.C.

Storm 10 to 24th

Jan. 17 - 33

River had been running about 10:30

9 am gage 0.8' = 110 soft

new crossing washed out 8 am

7 by 2 pm

Jan 17  $\begin{matrix} 0.7 \\ 0.8 \end{matrix} = 100$   $\begin{matrix} 1.0 \\ 1.2 \end{matrix} = 50$  = 150

Chocolate creek

Cam. 1.0 9 am .6 1 by 2

raining heavy from 12 noon on

chocolate road requires cut

Jan. 18 - 33

S.D. 9 am .65 = 50 = 50 soft 50

Choc. " .4 = 15 15 " 20

19 -

19 - S.D. .55 = 40 soft Ch. Cr. 2 1/2 soft = 45

20 - .8 = 110  $\begin{matrix} 7 am \\ 0.8 max \end{matrix} .4 = 10 = 120$

21 - .8 = 110 2.5 = 110

42

D = A      W.P.      r = 115030 G.

1.7 = 4 = 18.40 = 113 = 0.17 = 75 = 13 = 4  
 1.9 = 6 = 39.15 = 114 = 0.33 = 116 = 45 = 6  
 2.1 = 8 = 64.10 = 116 = 0.55 = 179 = 113 = 8  
 2.3 = 1.0 = 87.55 = 118 = 0.74 = 2.03 = 178 = 11  
 2.5 = 1.2 = 109.40 = 120 = 0.91 = 2.65 = 280 = 12  
 2.7 = 1.4 = 134.95 = 123 = 1.09 = 3.05 = 408 = 14  
 2.9 = 1.6 = 159.98 = 125.0 = 1.28 = 3.58 = 573 = 16  
 3.1 = 1.8 = 180.80 = 127.0 = 1.42 = 3.80 = 700 = 18  
 3.3 = 2.0 = 212.50 = 129.5 = 1.63 = 4.22 = 895 = 20  
 3.5 = 2.2 = 235.55 = 132.5 = 1.77 = 4.37 = 1025 = 22  
 3.7 = 2.4 = 262.90 = 135.5 = 1.94 = 4.62 = 1208 = 24  
 3.9 = 2.6 = 289.25 = 138.5 = 2.09 = 5.00 = 1448 = 26  
 4.1 = 2.8 = 316.65 = 141.5 = 2.24 = 5.20 = 1645 = 28  
 4.3 = 3.0 = 343.80 = 144.4 = 2.38 = 5.45 = 1875 = 30  
 4.5 = 3.2  
 4.7 = 3.4  
 4.9 = 3.6  
 5.1 = 3.8  
 5.3 = 4.0

S.D. river

S. D. RIVER

FISHING DEPARTMENT

U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF FISHERIES

WASHINGTON, D. C.

BB 3021

	Ar	WP	r	
3.7 = 0				
4.1 = 4 = 5.2	26.5 =	25		1.6 = 28.
4.3 = .6 = 14.95	40.0 =	276		2.8 = 75.
4.5 = .8 = 26.7	48.0 =	557		3.3 = 110
4.7 = 1.0 = 33.96	50.0 =	67		4.0 = 182
4.9 = 1.2 = 45.45	52.5 =	867		4.5 = 243
5.1 = 1.4 = 59.2	54.0 =	1000		5.1 = 338
5.3 = 1.6 = 66.4	57.0 =	117		

Chocolate

N 5030 G.

D = A	W.P.	r =
1.7 = 4 = 18.40 = 113		0.17 = 55 = 13 = 4
1.9 = 6 = 39.15 = 114		0.33 = 116 = 45 = 6
2.1 = 8 = 64.10 = 116		0.55 = 179 = 113 = 8
2.3 = 1.0 = 87.55 = 118		0.74 = 203 = 178 = 10
2.5 = 1.2 = 109.40 = 120		0.91 = 265 = 280 = 12
2.7 = 1.4 = 134.95 = 123		1.09 = 305 = 408 = 14
2.9 = 1.6 = 159.98 = 125.0		1.28 = 358 = 573 = 16
3.1 = 1.8 = 180.80 = 127.0		1.42 = 380 = 700 = 18
3.3 = 2.0 = 212.50 = 129.5		1.63 = 422 = 895 = 20
3.5 = 2.2 = 235.55 = 132.5		1.77 = 457 = 1025 = 22
3.7 = 2.4 = 262.90 = 135.5		1.94 = 462 = 1208 = 24
3.9 = 2.6 = 289.65 = 138.5		2.09 = 500 = 1448 = 26
4.1 = 2.8 = 316.65 = 141.5		2.24 = 520 = 1645 = 28
4.3 = 3.0 = 343.80 = 144.4		2.38 = 545 = 1875 = 30
4.5 = 3.2		
4.7 = 3.4		
4.9 = 3.6		
5.1 = 3.8		
5.3 = 4.0		

S. D. D. D.

SING DEPARTMENT

Resolution No. \_\_\_\_\_

Contract No. \_\_\_\_\_

Approved \_\_\_\_\_

S form 10 to 24 th

Jan. 17 - 33

River had been running about 10 soft

9 am gage 0.8' = 110 soft

new crossing washed out dam

2.7 by 2: pm

Jan 17 <sup>0.73</sup> 0.85 = 100 <sup>0.73</sup> 0.85 = 50 = 150

Chocolate creek

Cam. 1.0 9 am .6 1 by 2:30

raining heavy from 12 noon on

chocolate road requires culvert

Jan. 18 - 33

S.D. 9 am .65 = 50 = 50 soft 50

Choc. " .4 = 15 15 " 20 <sup>70</sup>

19 -

19 - S.D. .55 = 40 soft ch. Cr. 2 1/2 soft = 25

20 - .8 = 110 <sup>7 am</sup> (0.8 max) .4 = 70 = 120

21 - .8 = 110 2.5 = 110

S.D.

CH C

42

Jan. 22 - 70 = 80

" 23 - 75 = 100

" 24 - 1.0 = 120

" 25 - 1.0 = 115

" 26 - 1.0 = 115

" 27 - 1.0 = 115

" 28 - 1.0 = 115

" 29 - 1.0 = 178

" 30 - 1.3 = 440

" 31 - 1.4 = 230

Feb 1 10 -

2 10

3 9

4 8

5 8

6 8

7 7

8 6

2.5

10.

10.

10

5

5

5

.6

1.

5

110

80

120

190

125

120

120

120

210

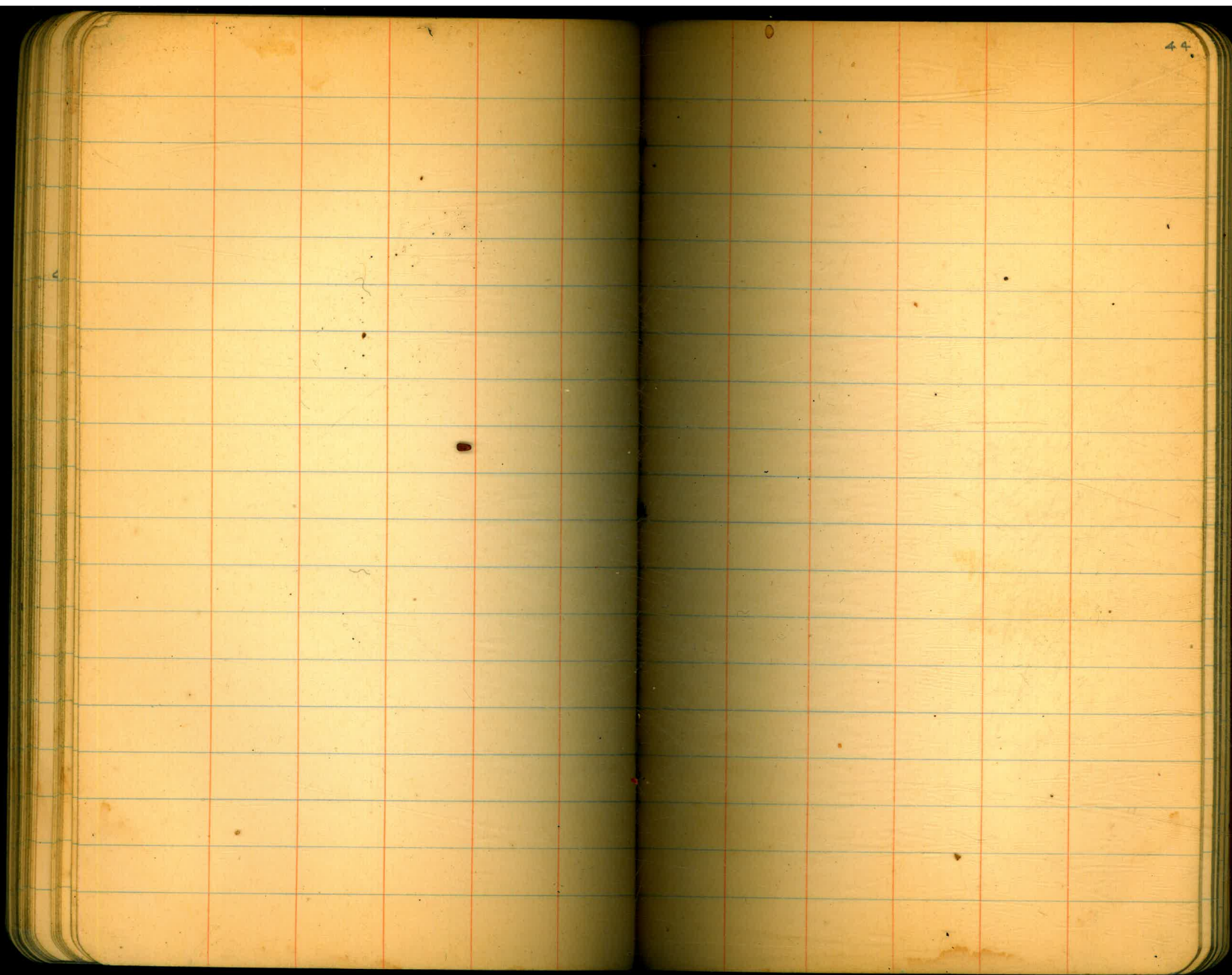
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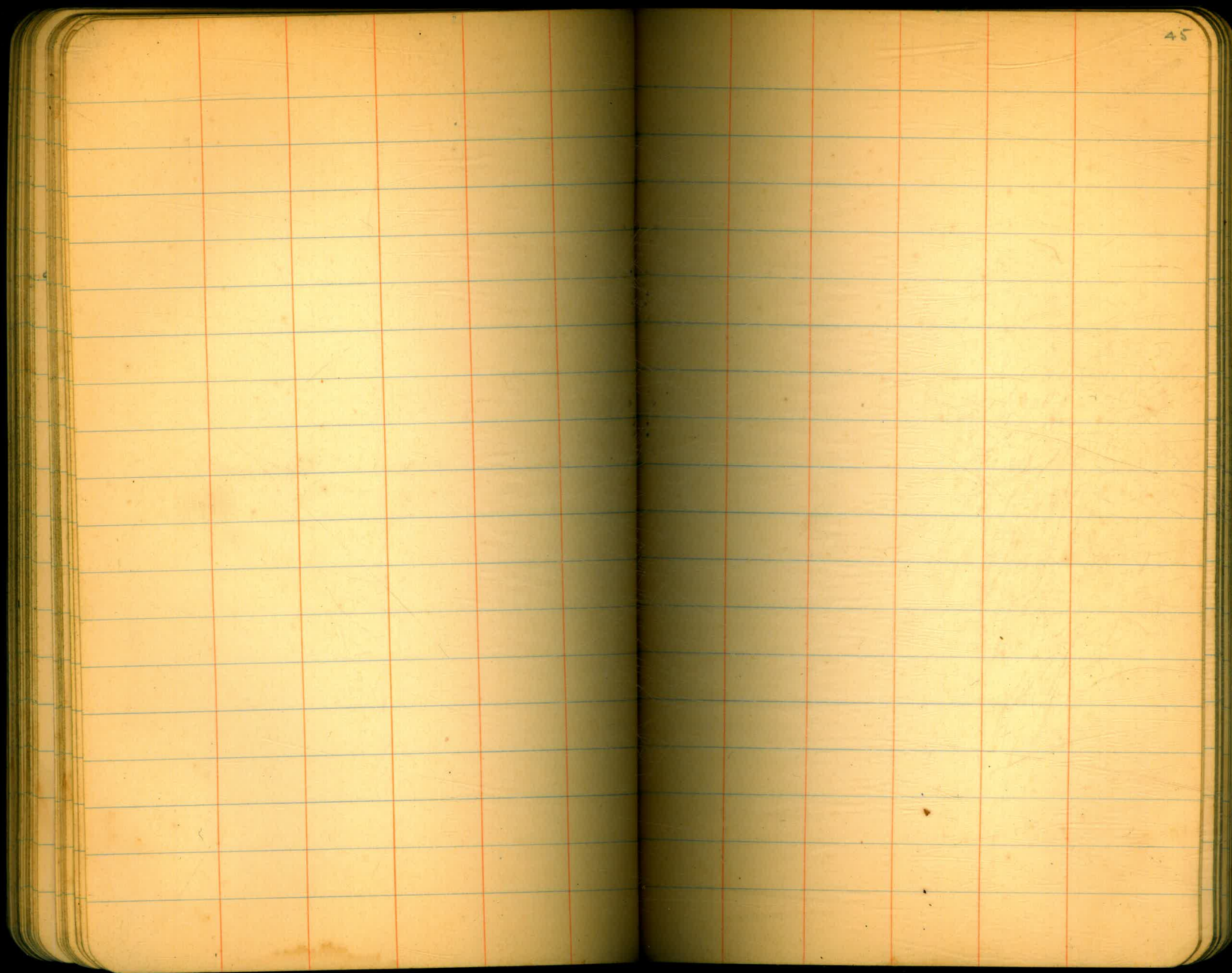
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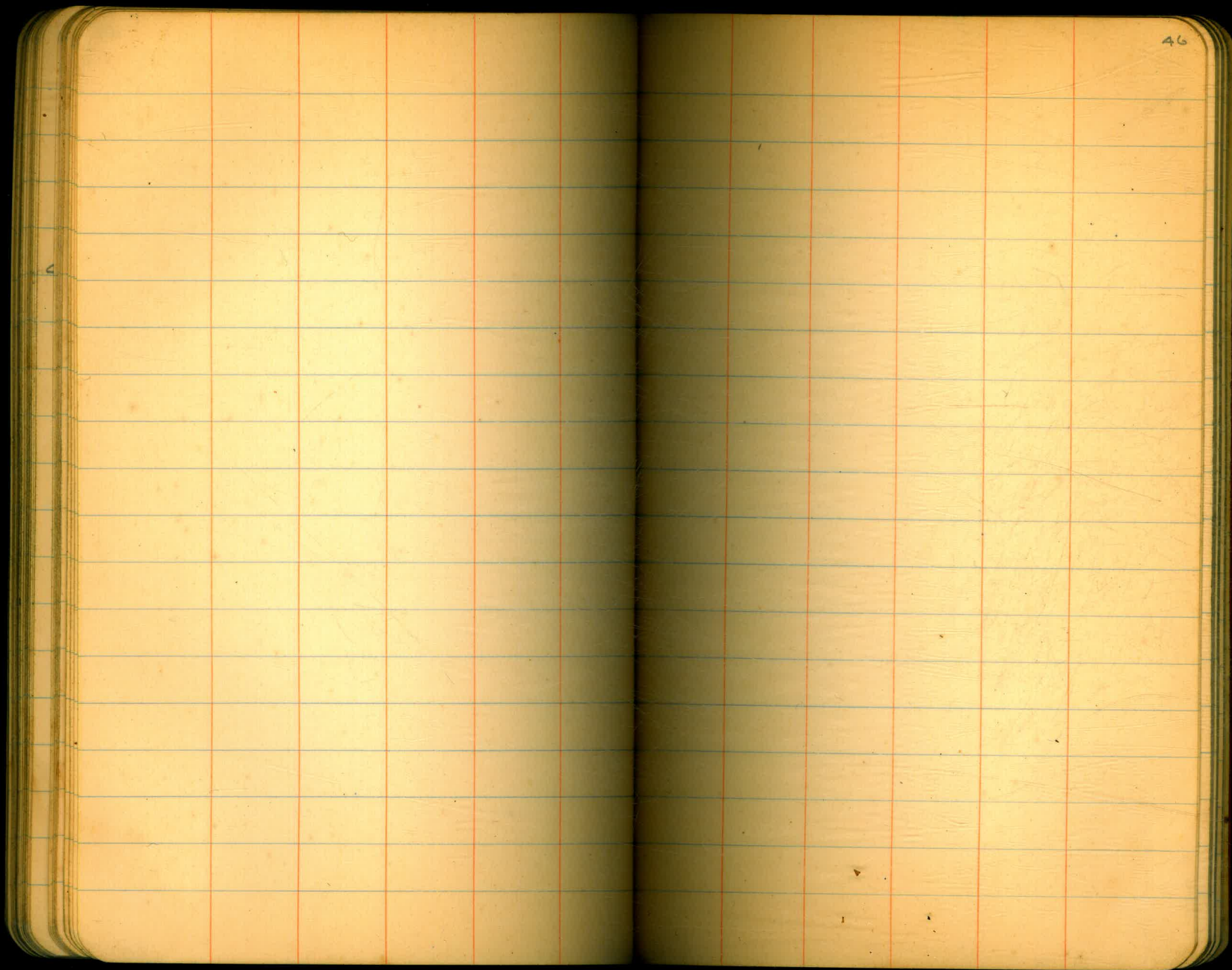
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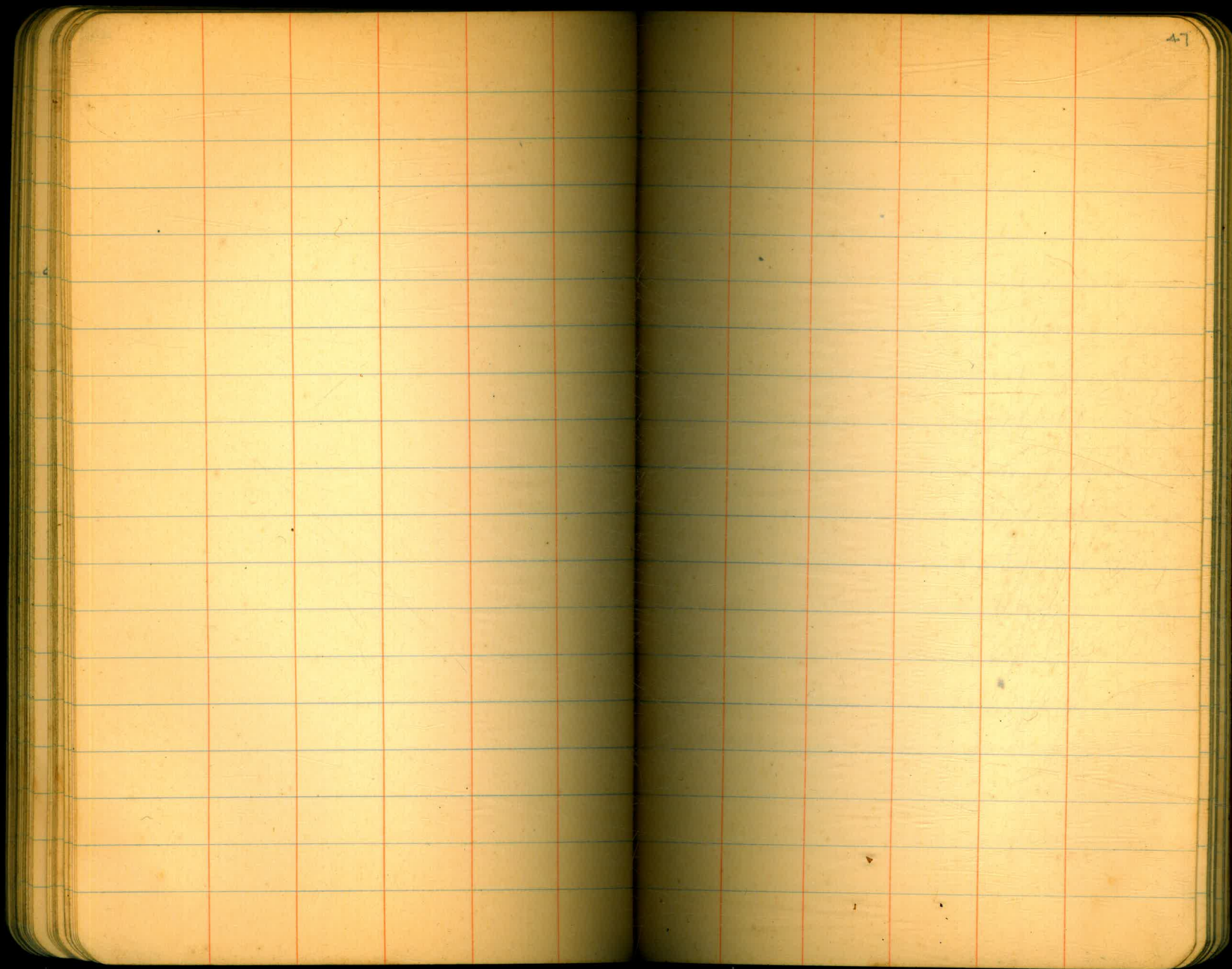


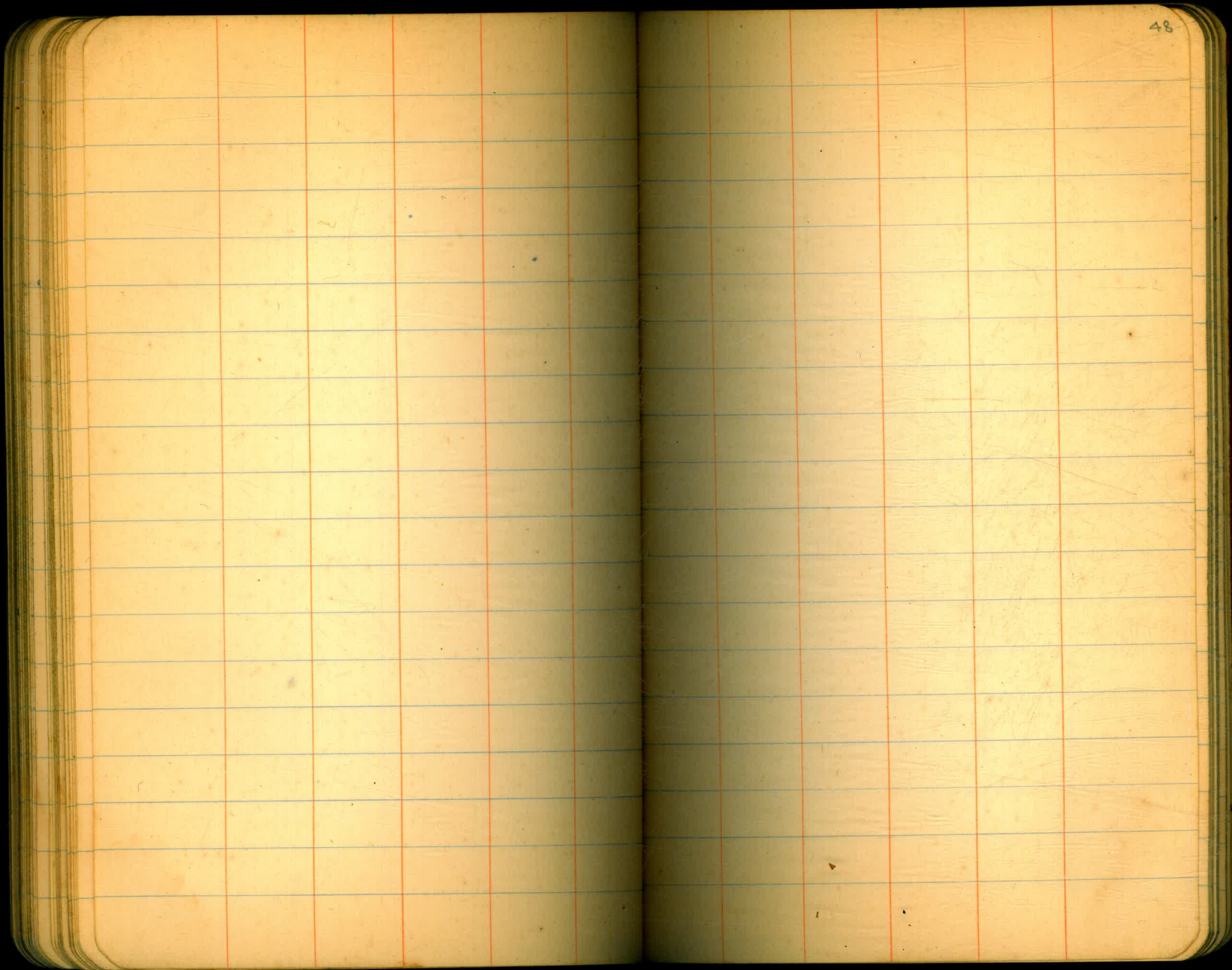




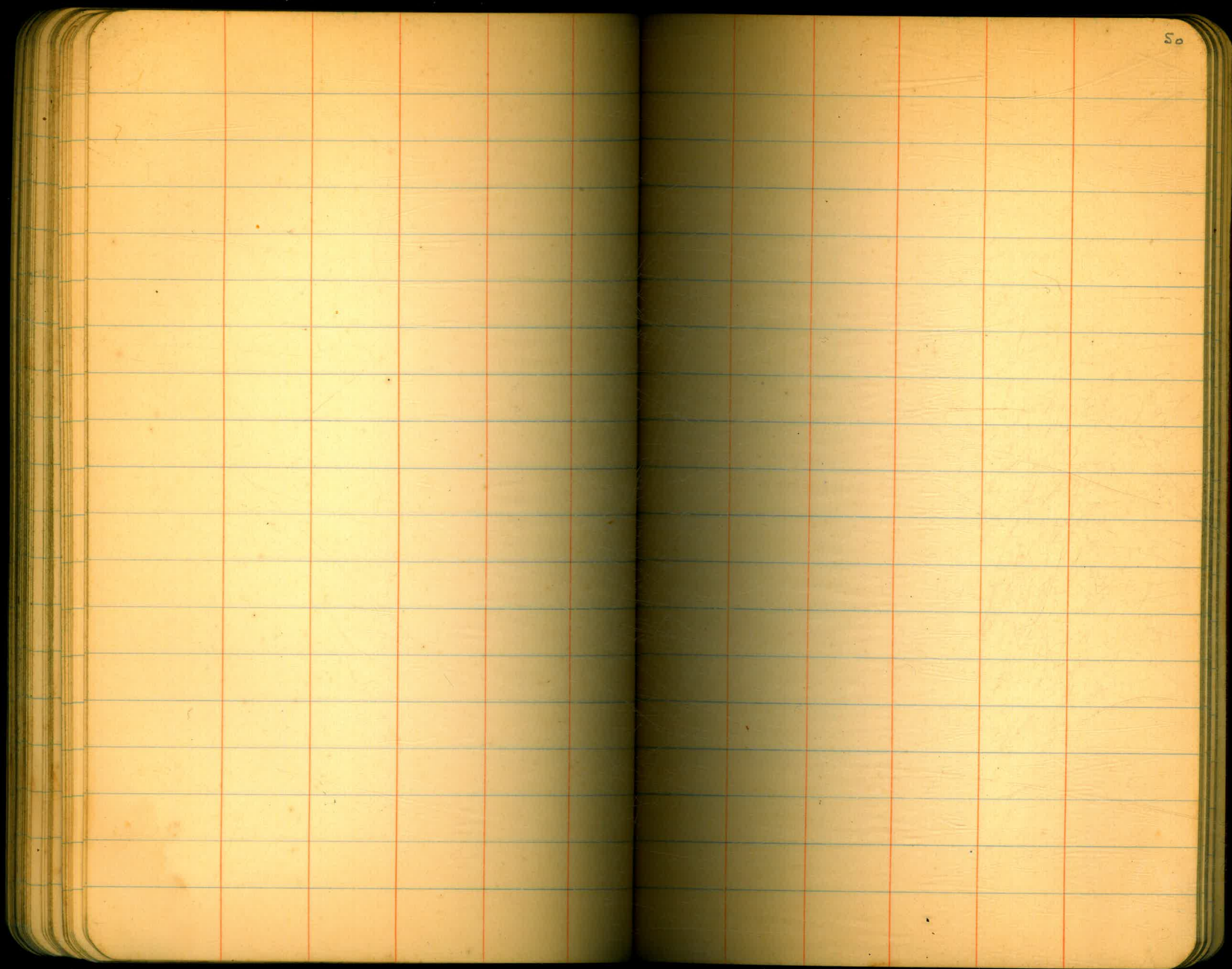


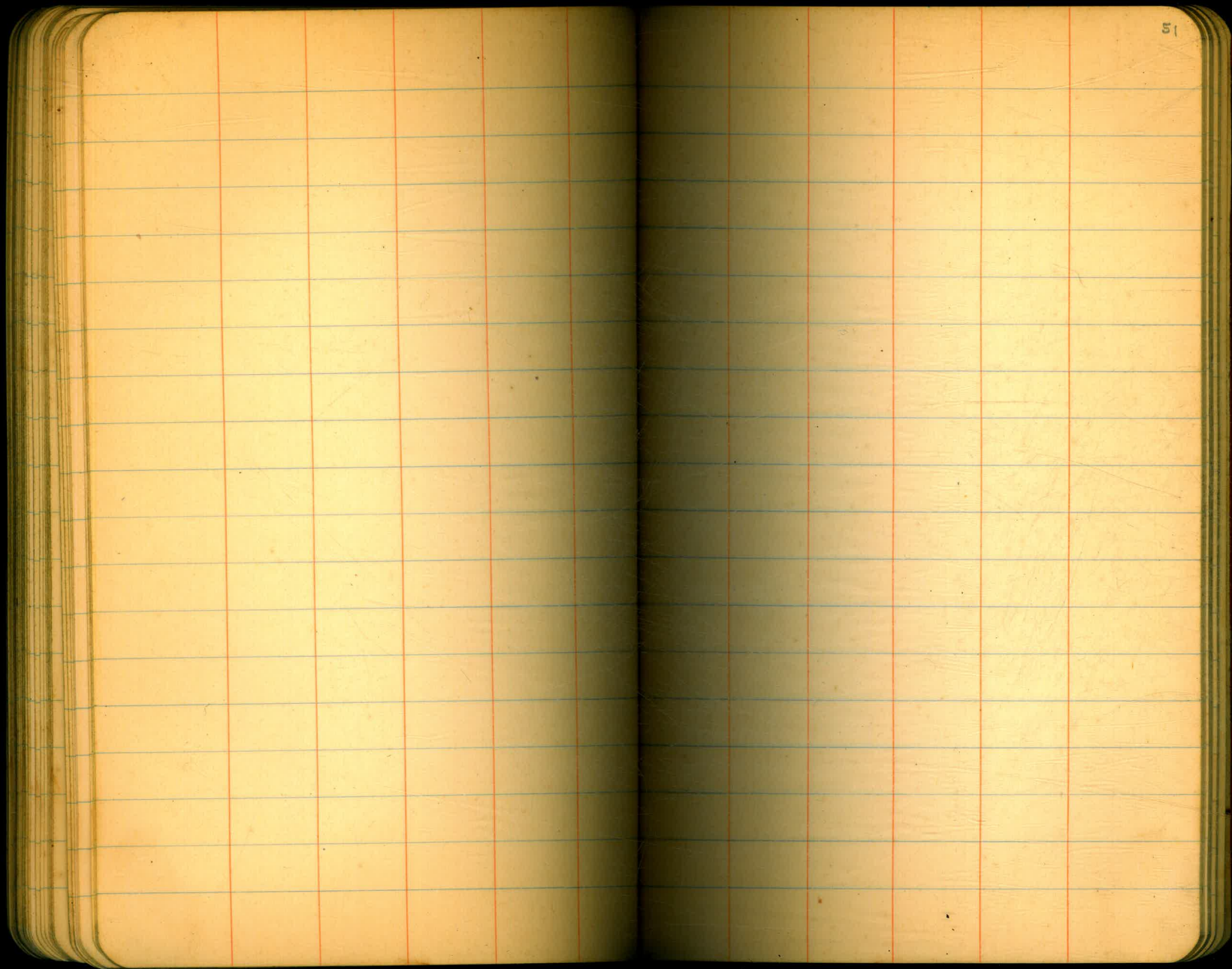




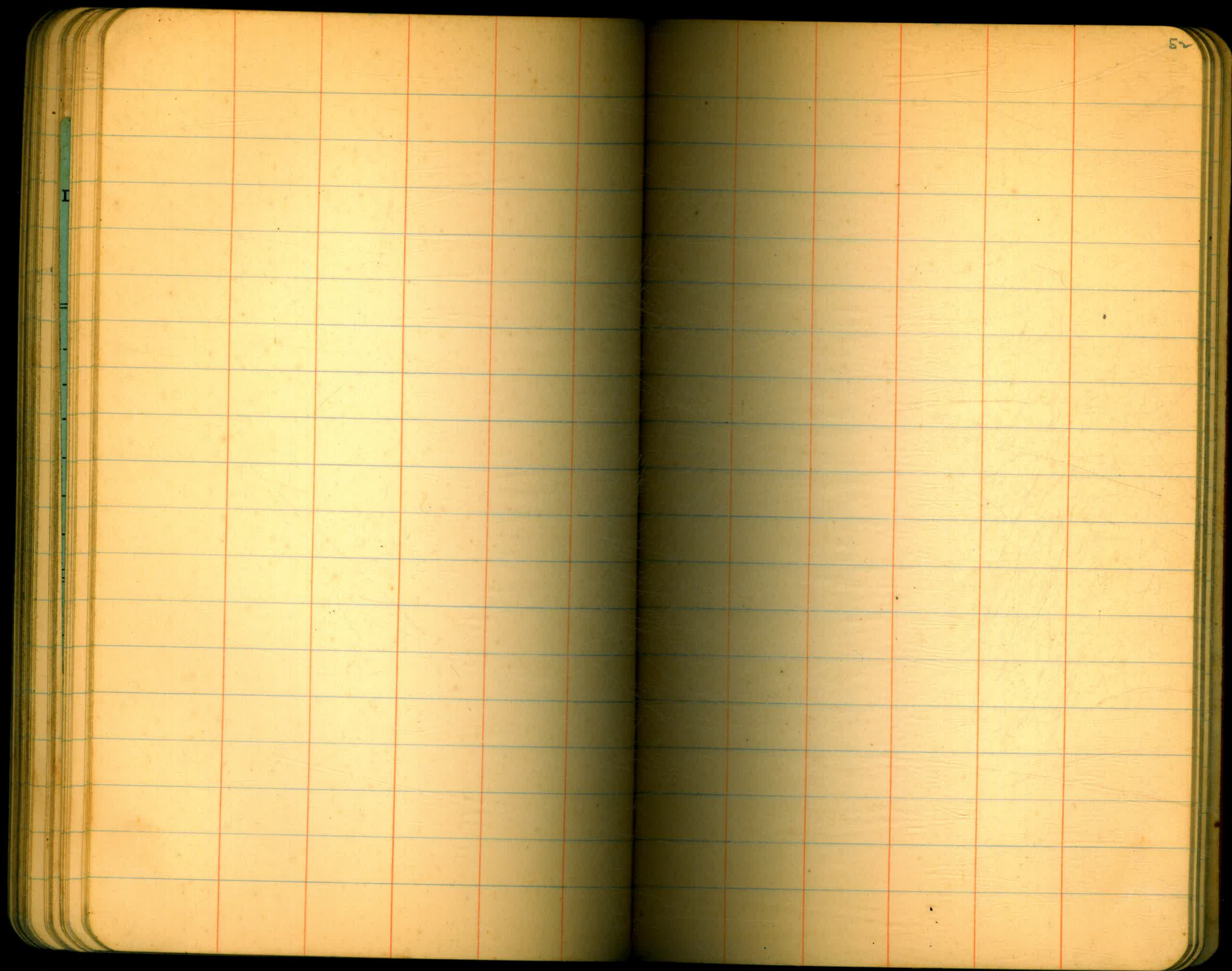


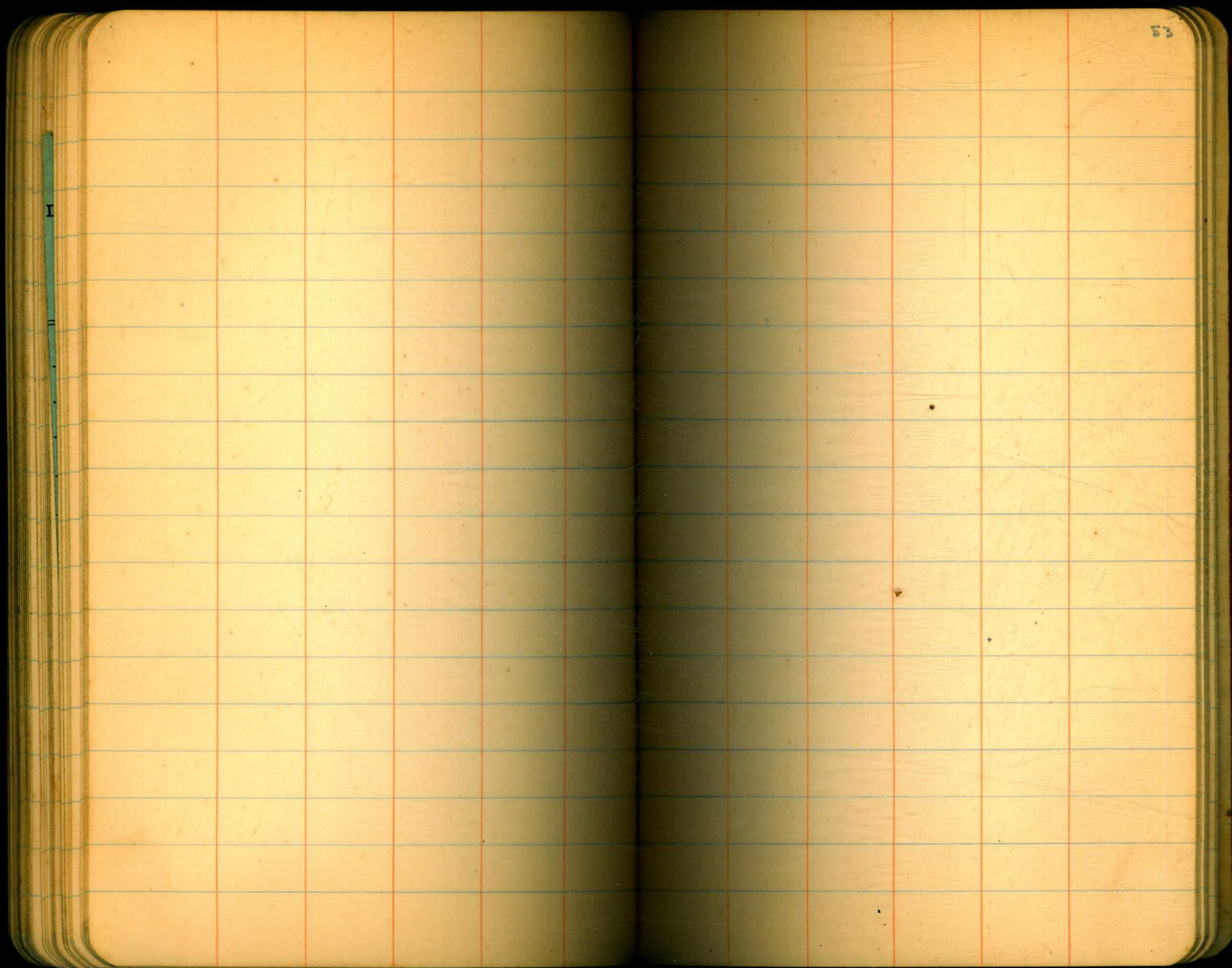






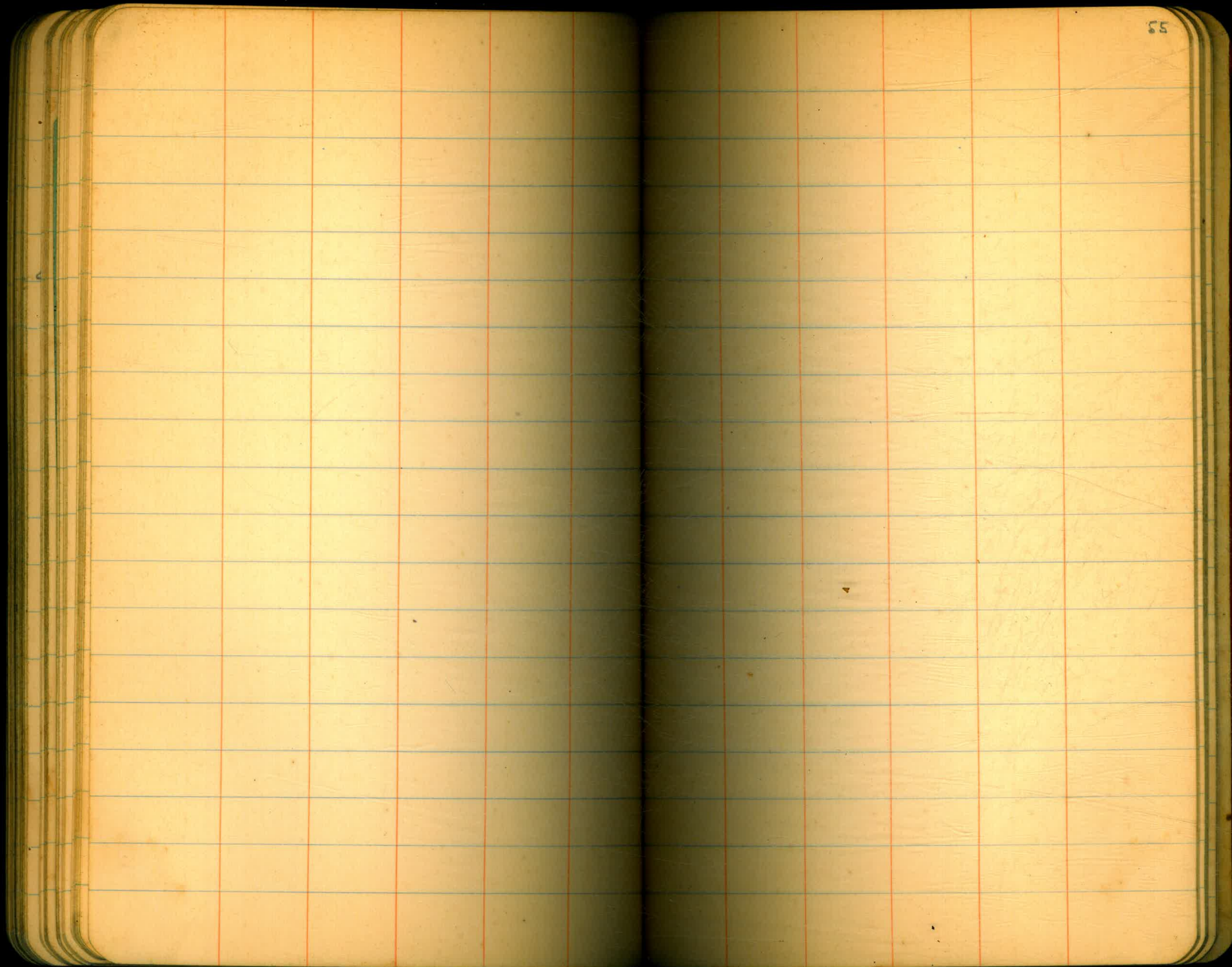






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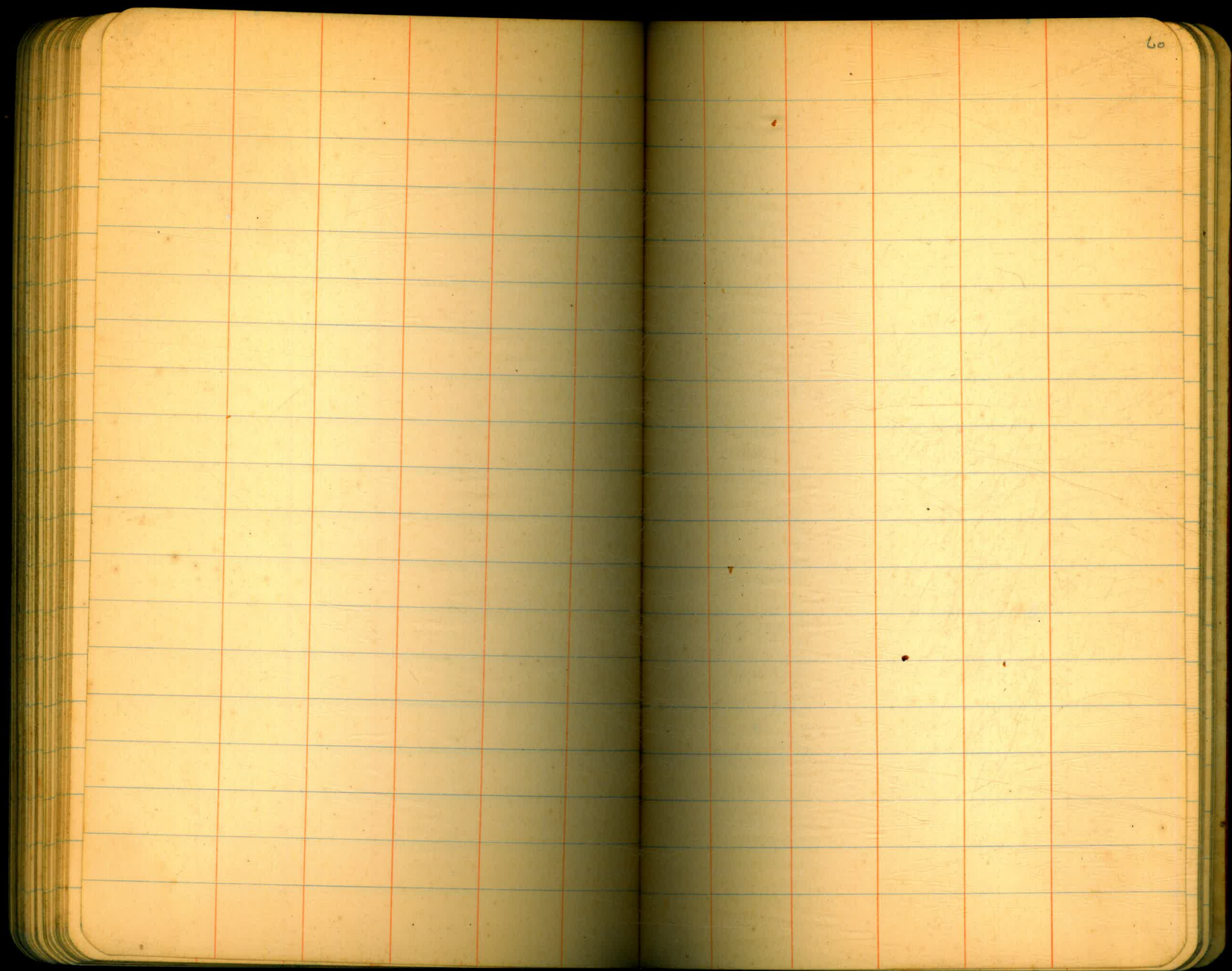
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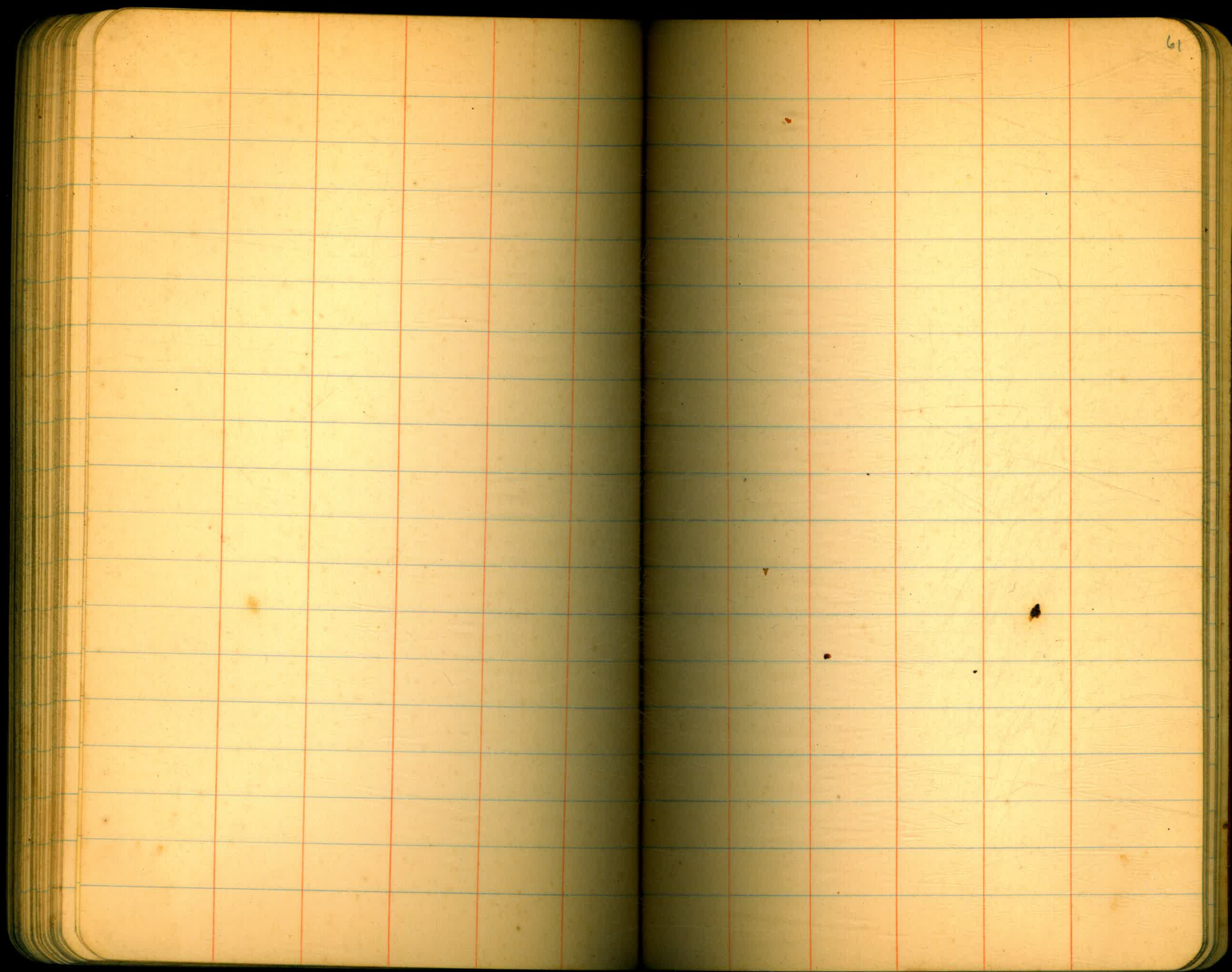


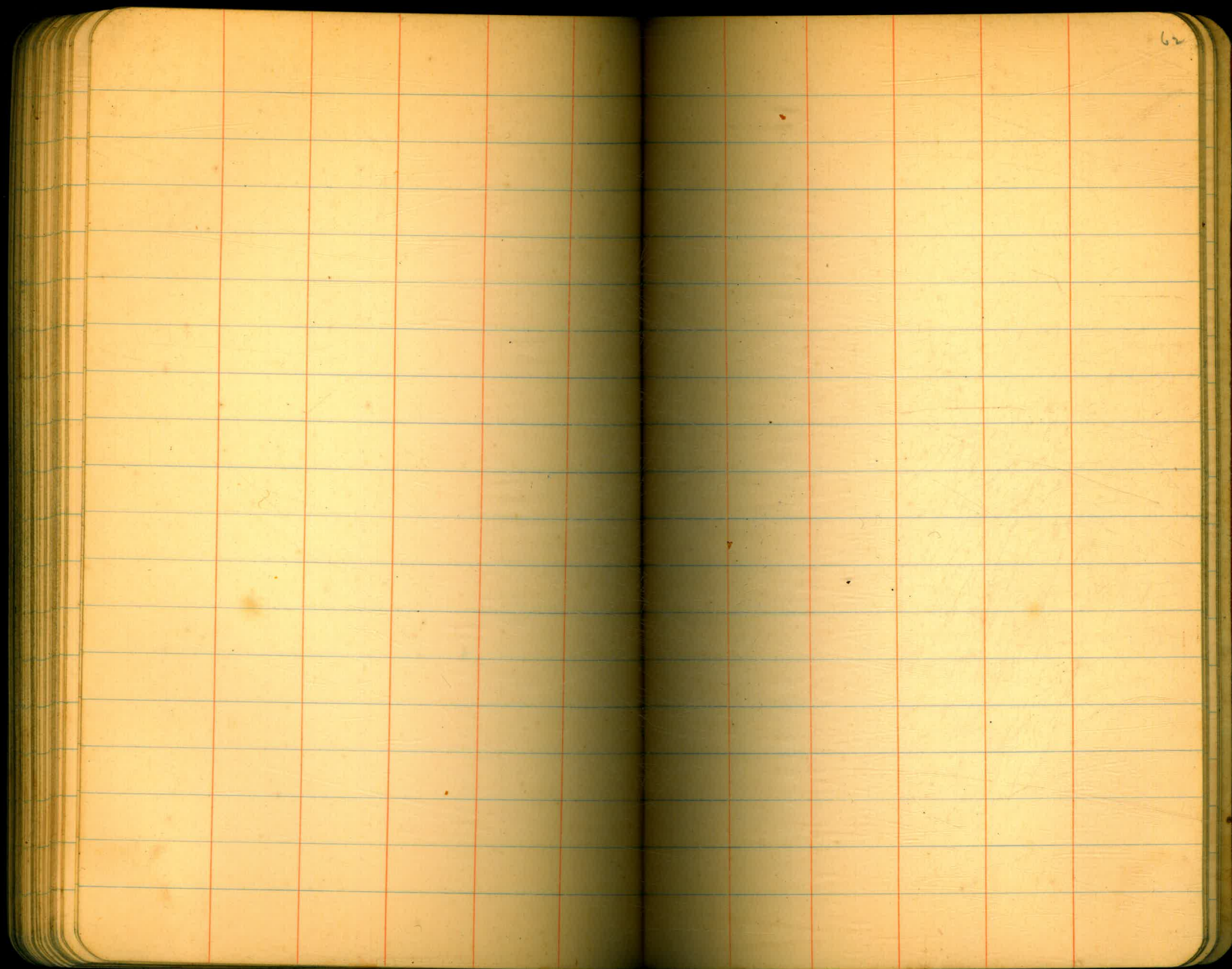




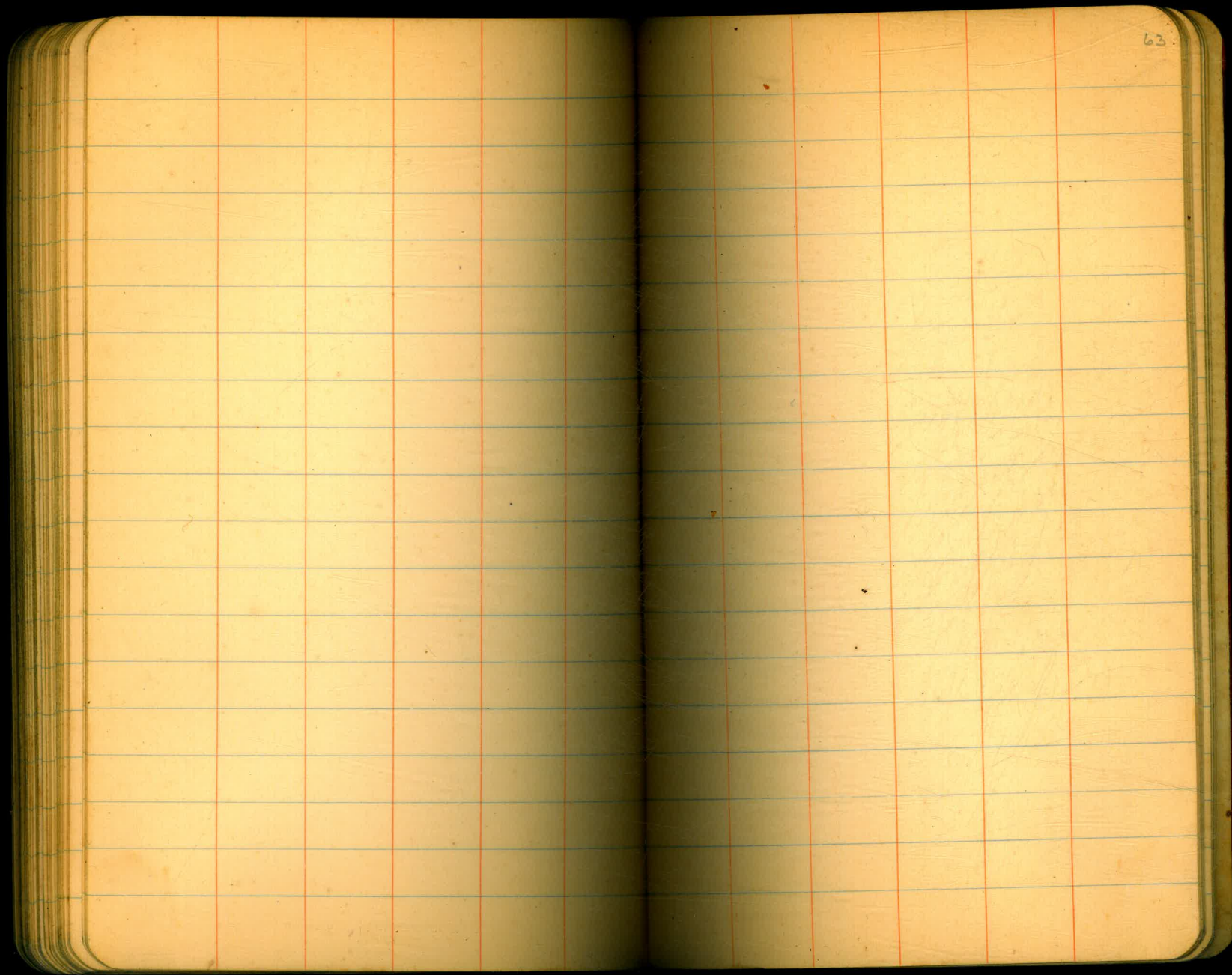


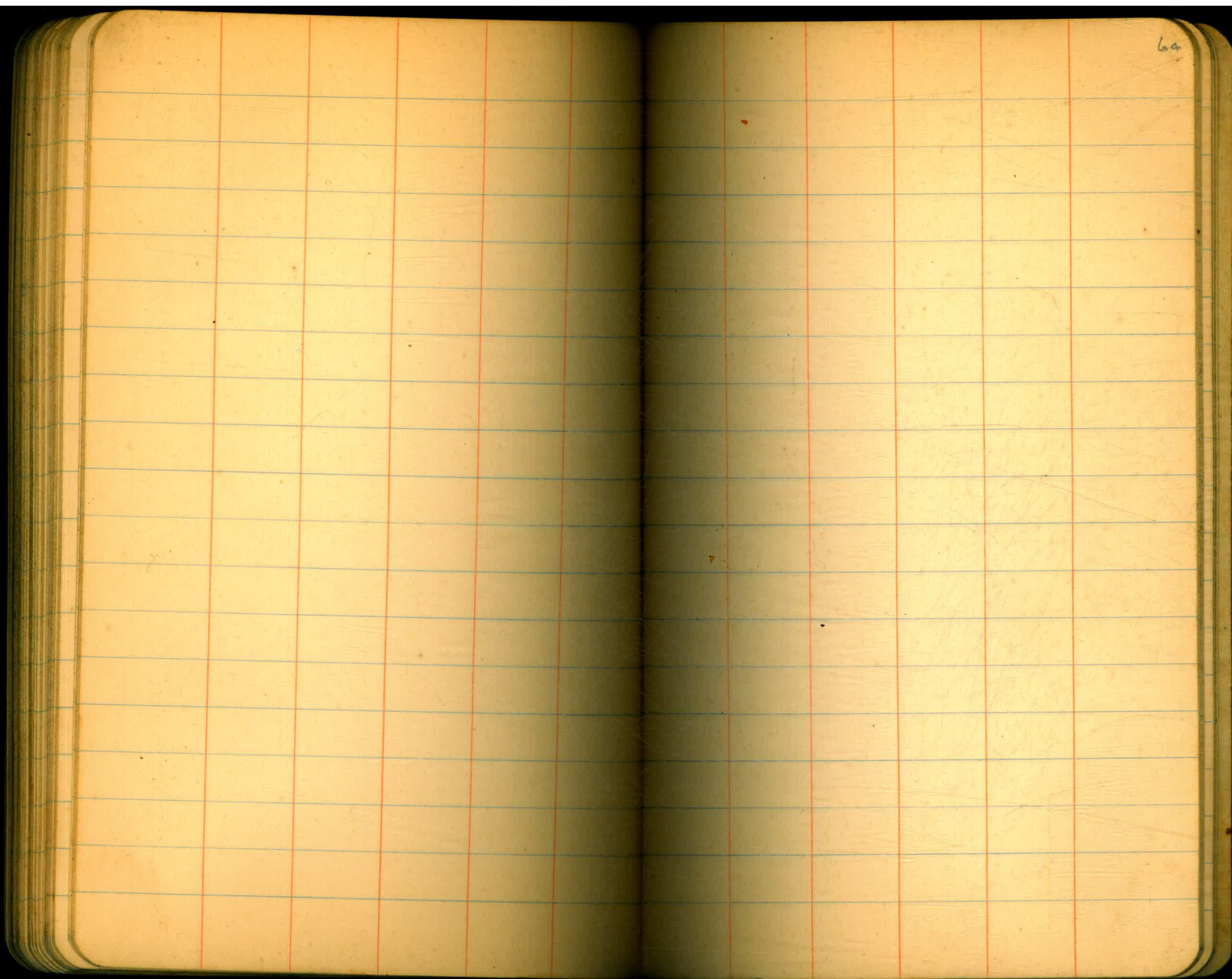


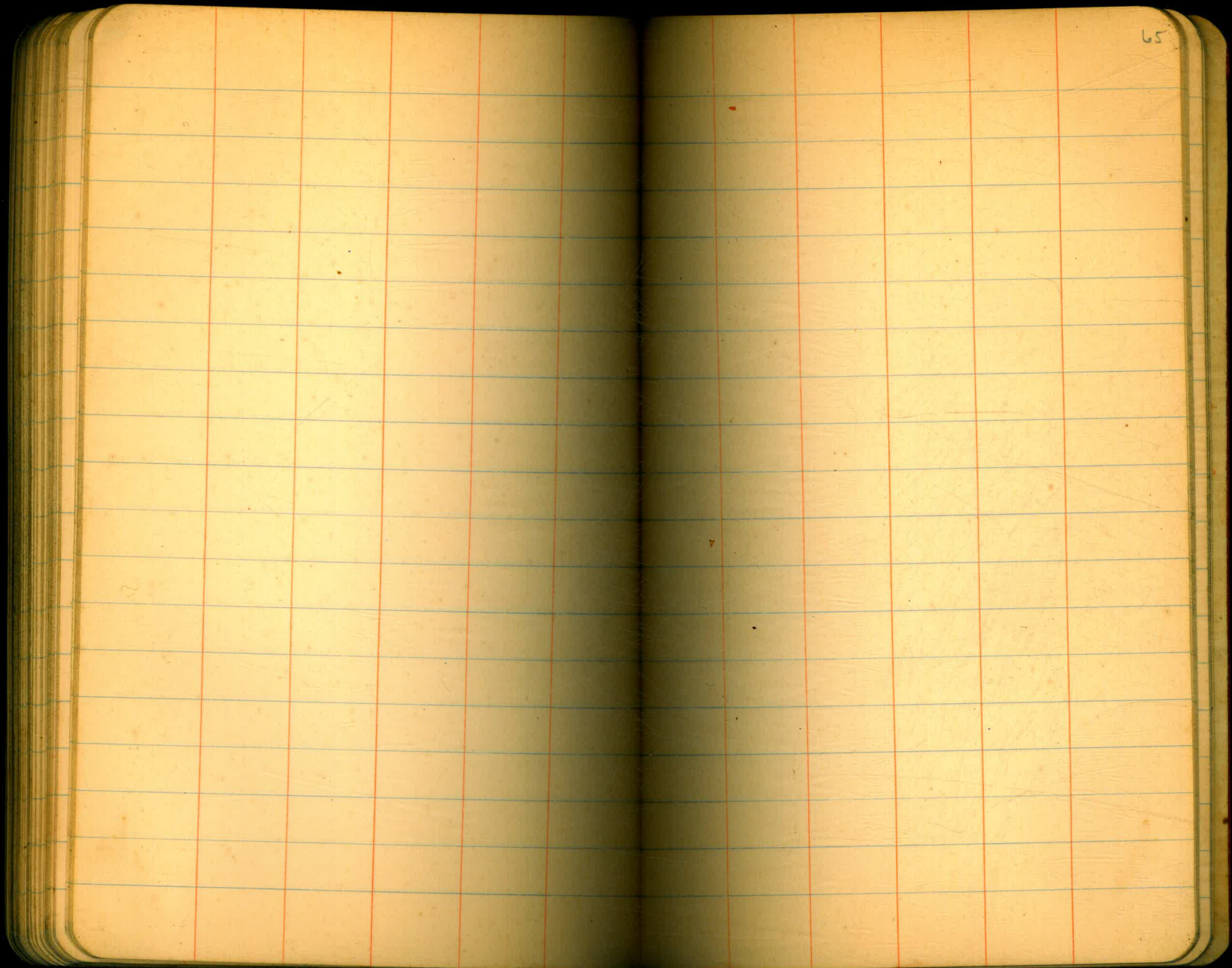


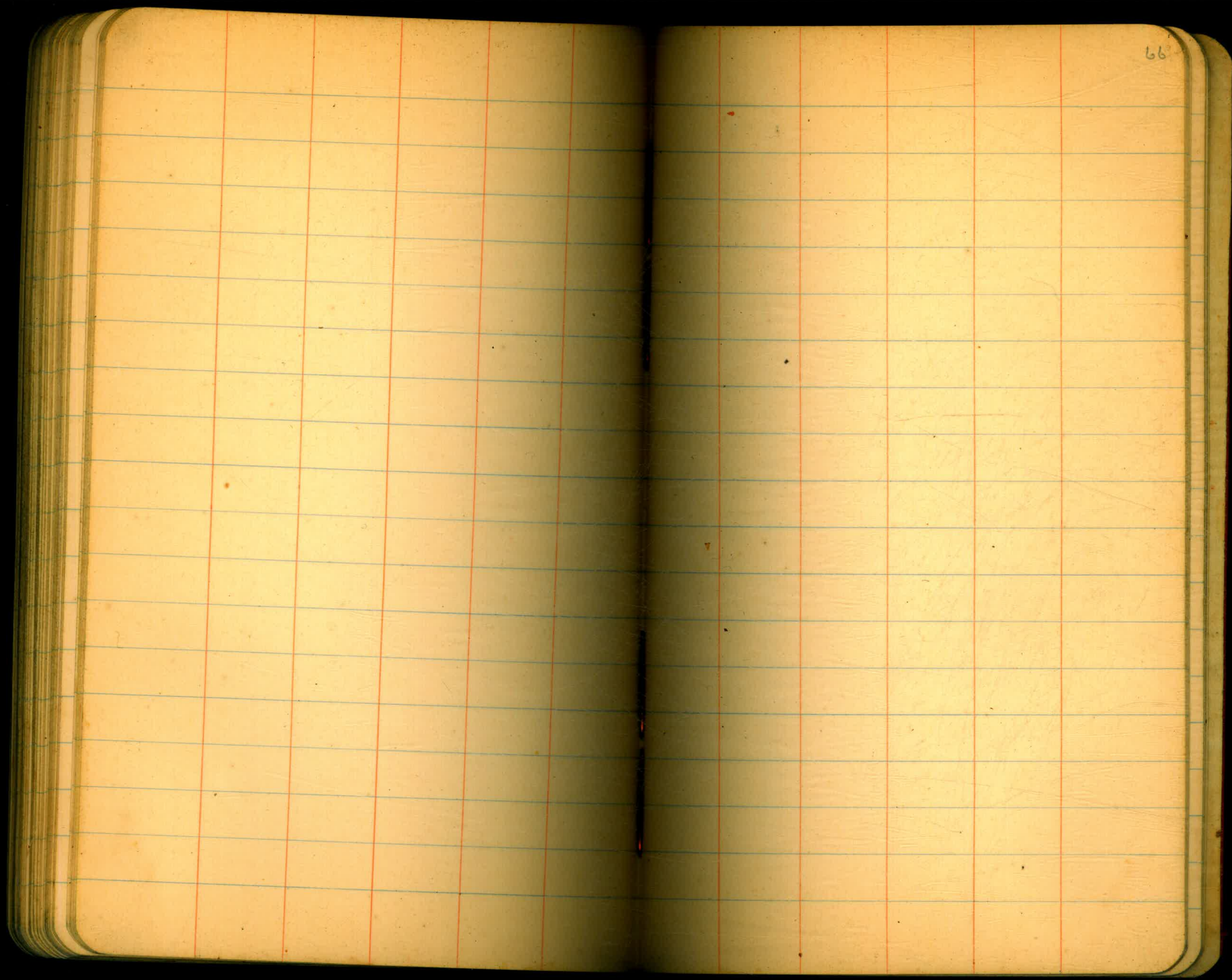


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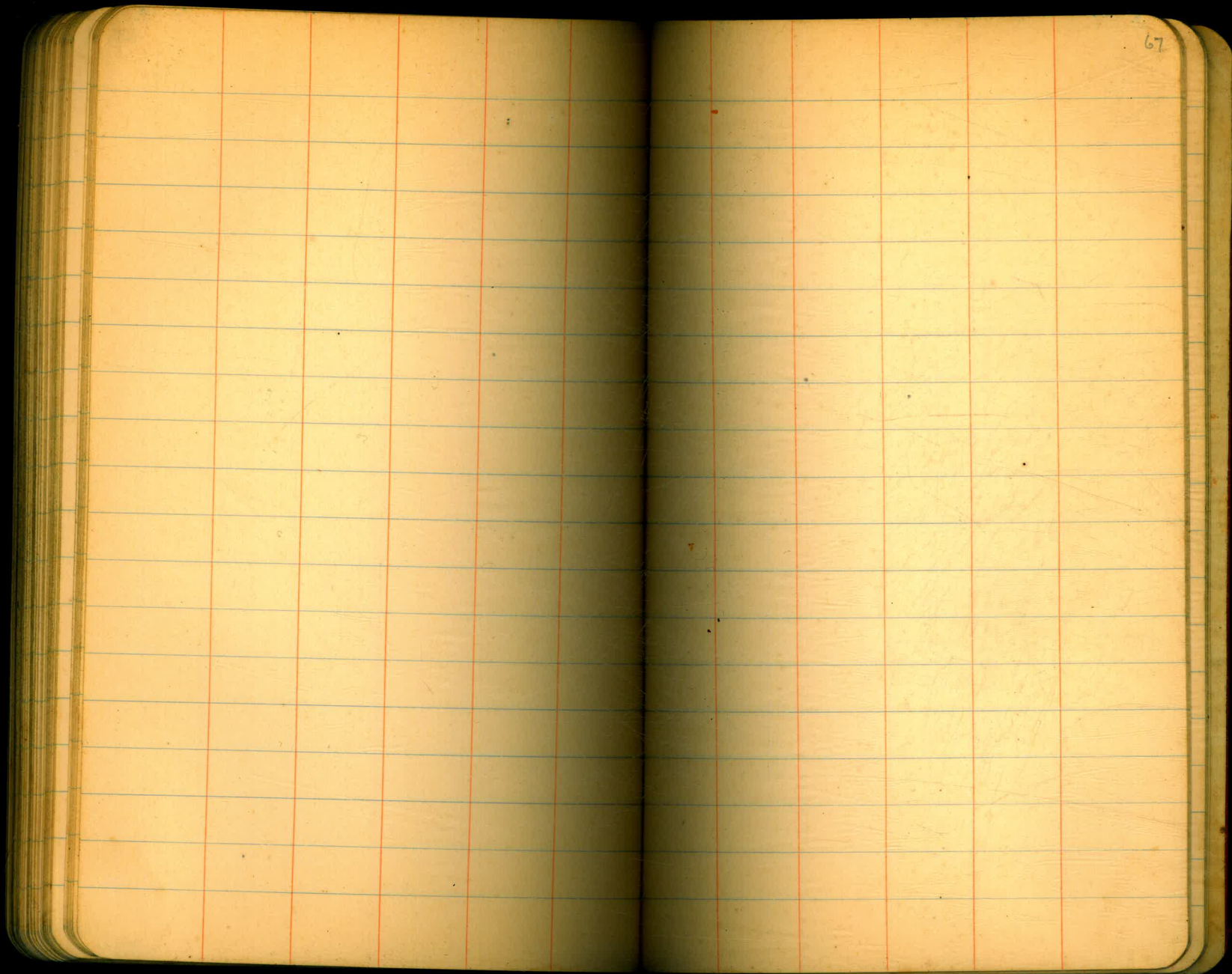






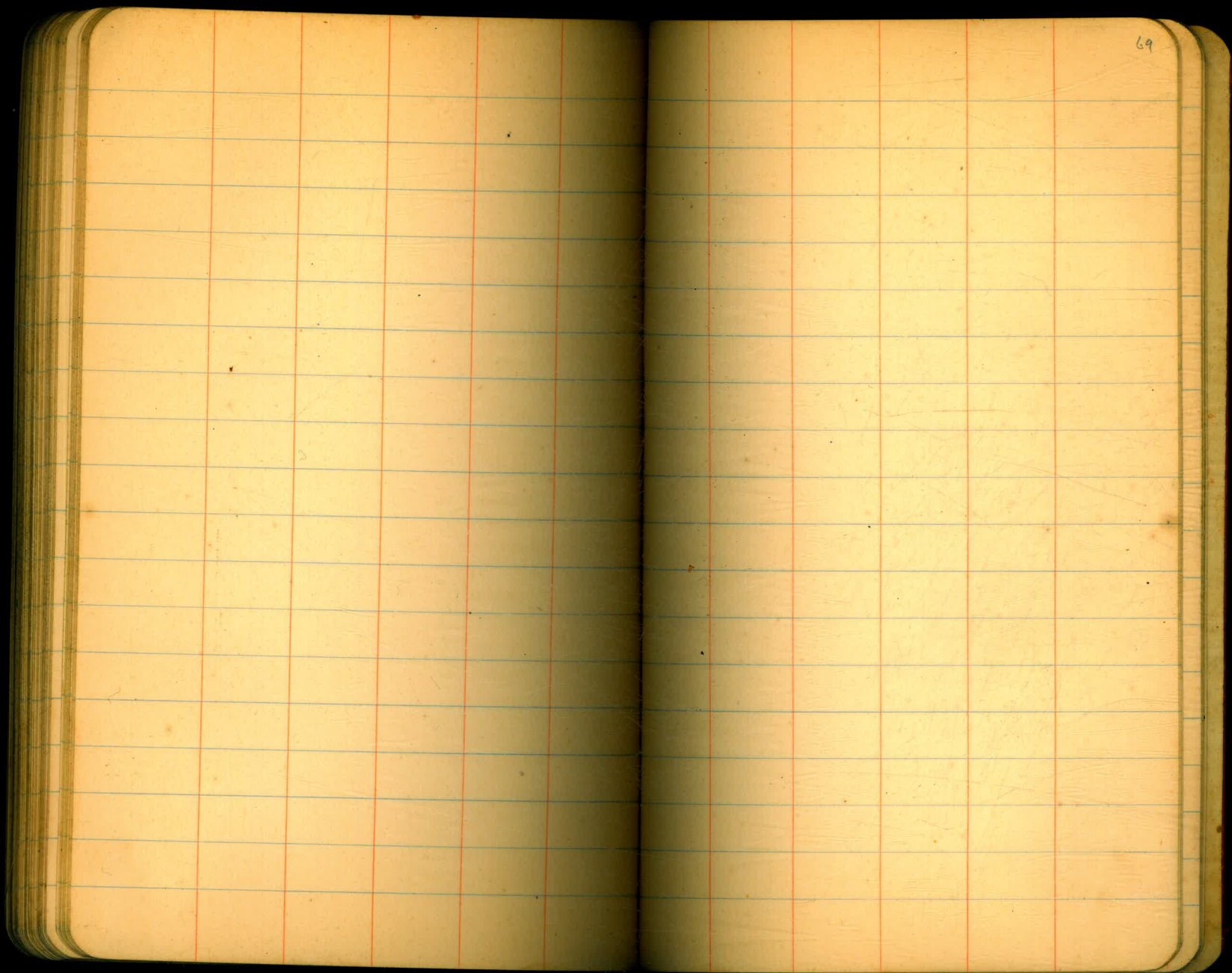


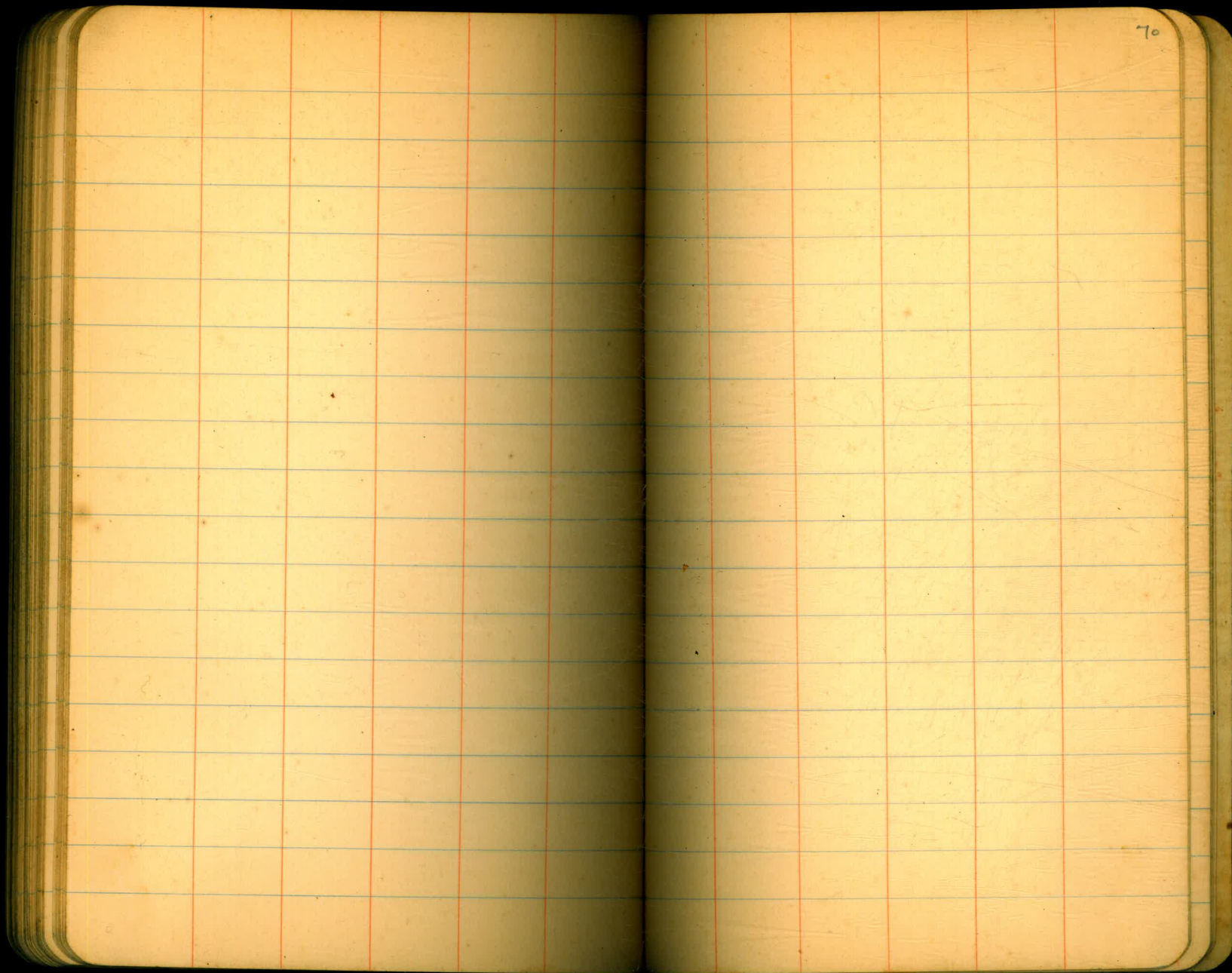
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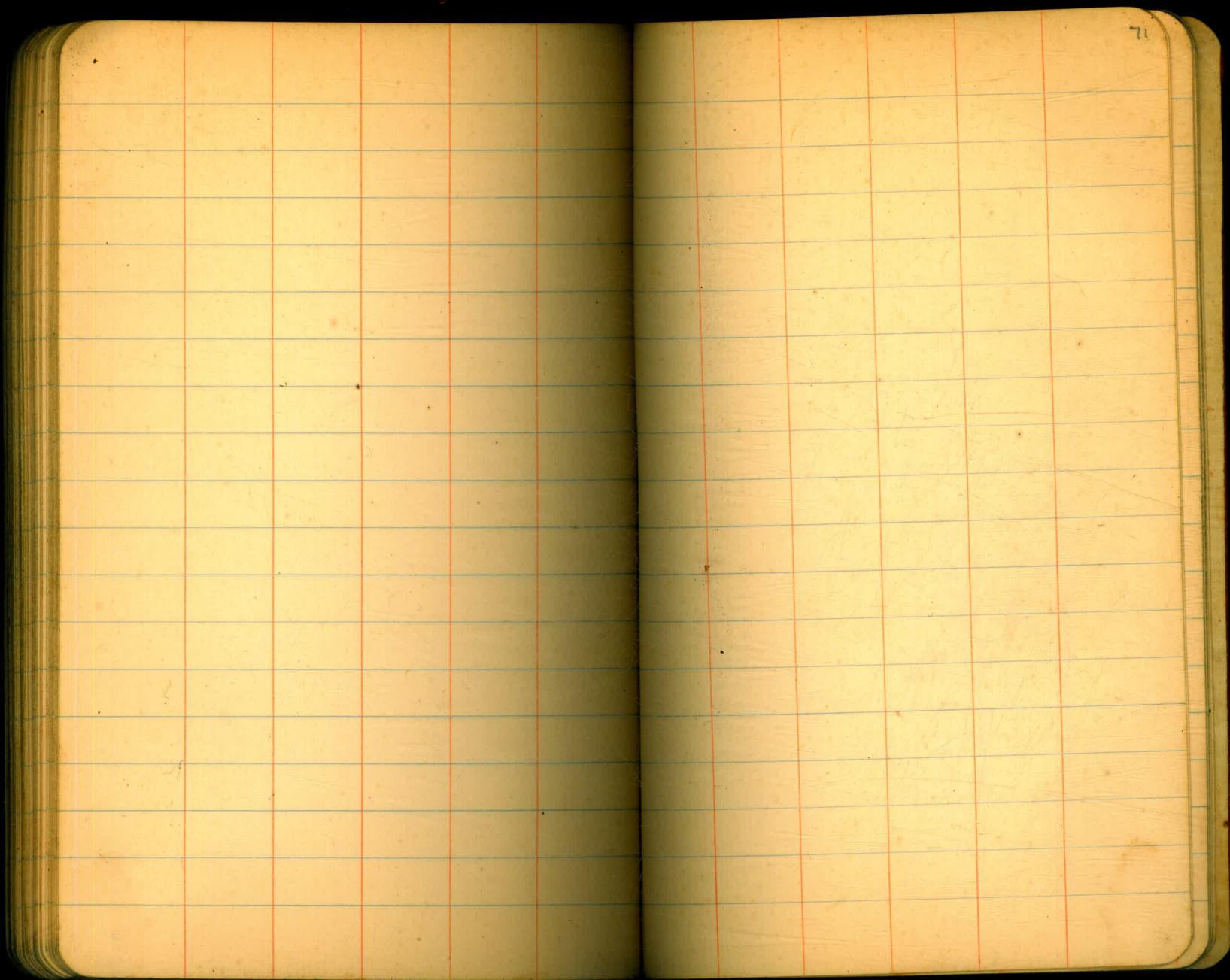


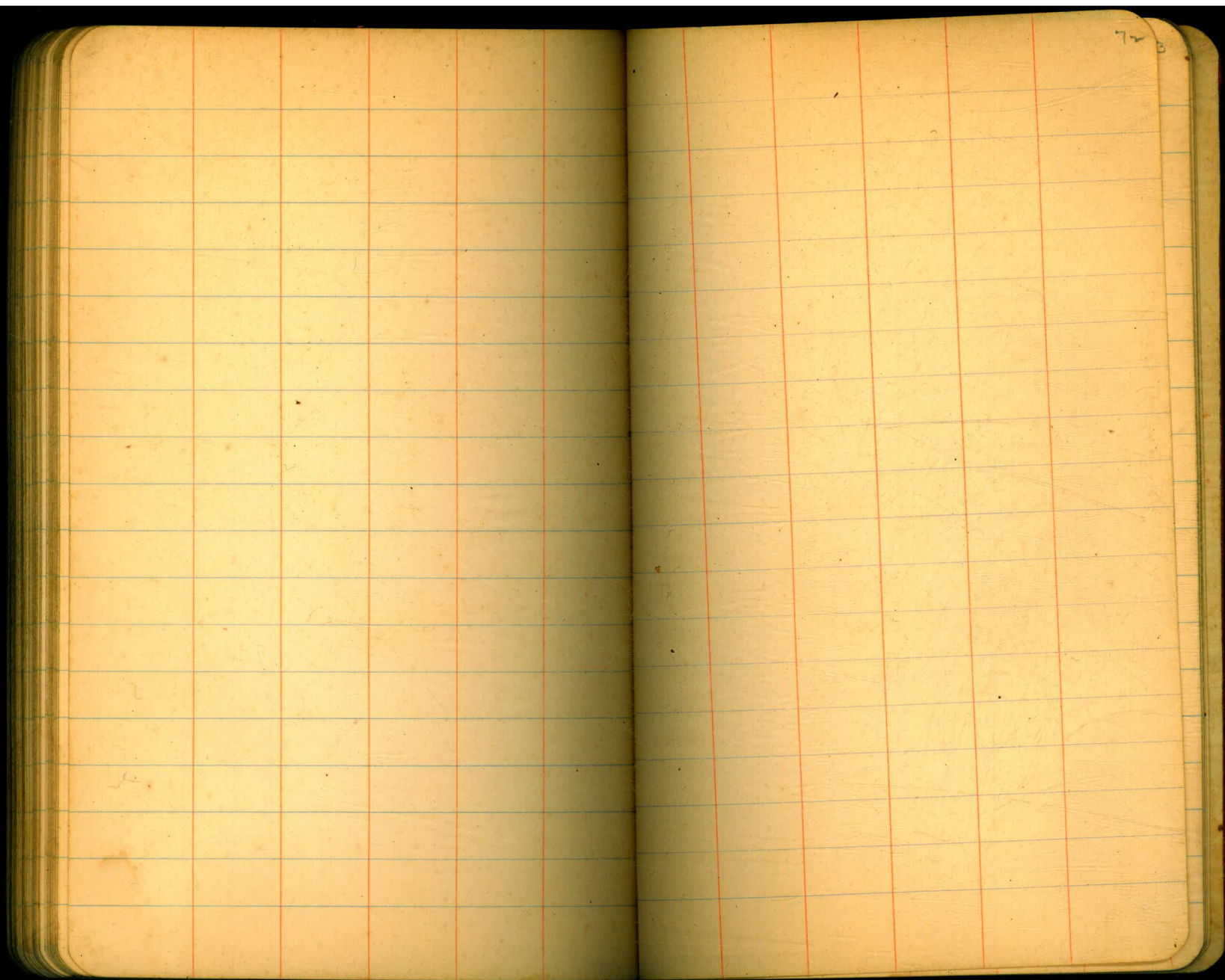












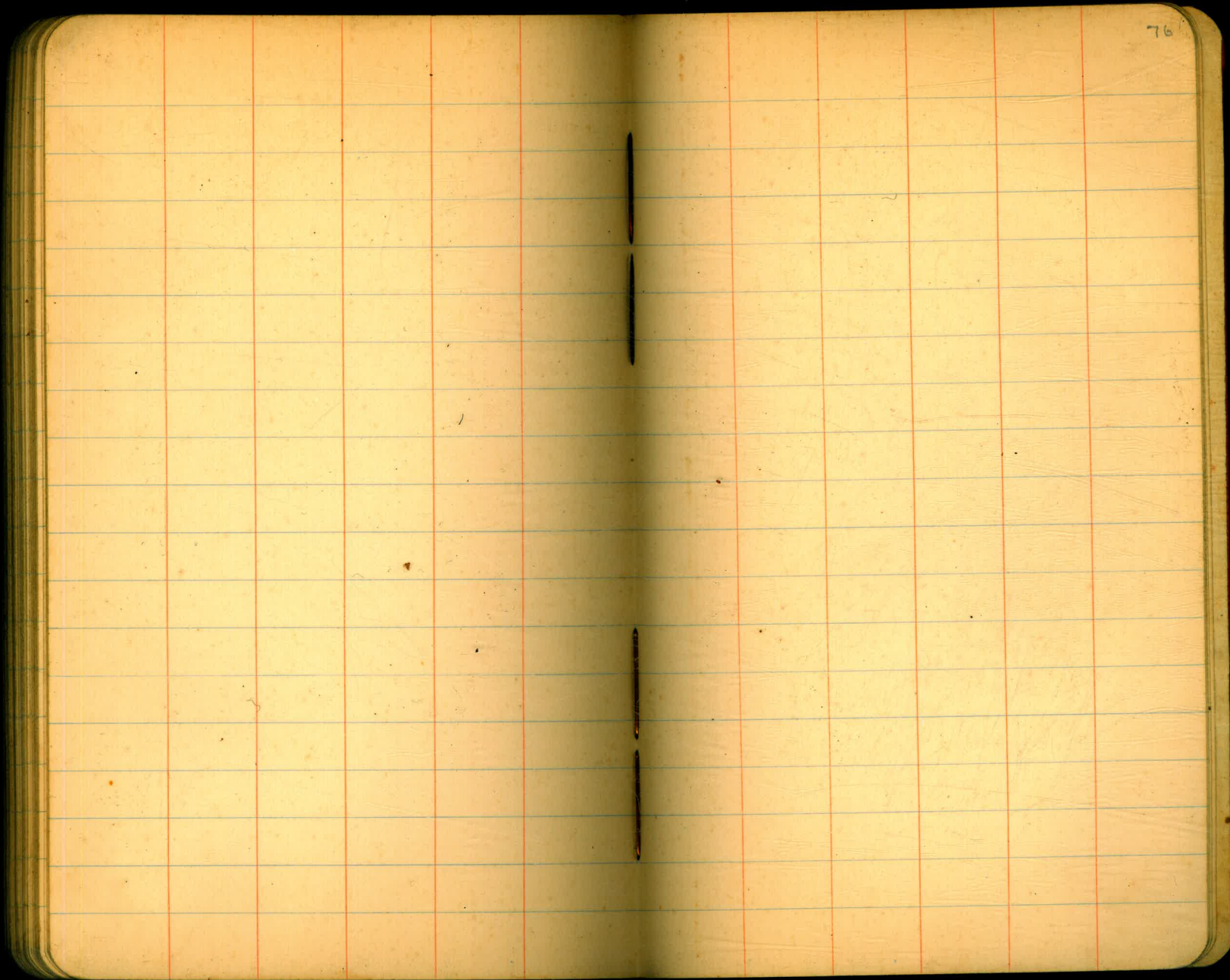
72 B

The image shows an open notebook with two facing pages. Both pages are cream-colored and feature light blue horizontal ruling. Each page is divided into two columns by two vertical red margin lines. The pages are blank, with no handwriting or printed text. The notebook's cover is dark, and the pages have rounded corners. The page number '27' is printed in the top right corner of the right-hand page.

The image shows an open notebook with two facing pages. The pages are cream-colored and feature a grid of light blue horizontal lines and vertical red margin lines. The right page is numbered '74' in the top right corner. The notebook is bound in the center, and the pages are otherwise blank.









stakes set on Chocolate creek road  
giving res. data

found stake marked (by P.O.G) 766.00

10.6 776.6

road survey 7715.0 4.5 72.1 marked  
grade

7.7 768.9

5.5 774.4

755.77 B.M. on road  
west side of  
old flume structure

3.50 759.3

$$v = C \sqrt{fs}$$

Number of Trees not less than 1/4 cord

79

Reel	N <sub>2</sub>	1/4 cord	1 cord
Reiniger on s-s bank of River	90	88	2
Bioletti " " " "	4		will make 9
South of Bioletti	14	14	
Reserved north of B.	10	9	1
Hayden	50	46	4
Wilson	42	40	2
" N-W of River	65	63	2
Hayden " " "	46	45	1
Reserved " " "	30	30	
Bioletti	12	12	
Reiniger	11	10	1 will make 2
Reel	18	18	
Harley Chocolate creek	60	55	5

1.75 a'

$\sqrt{29}$

8 x 2.2

17.6

18  
2

Cleaning data Res. Bas.

449 acres \$ 33.71 p. ac.

35 " \$ 53.00 p. ac.

1580 acres total

CALCULATION OF EARTHWORK.

Width	HEIGHT														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if  $w=16.2$  and  $h=5.3$ , cu. yds.  $=1.48+.028+.089=1.597$  cu. yds. or practically 160 cu. yds. per 100 ft. If  $w$  exceeds 40 ft., use one half and multiply result by 2, if both  $w$  and  $h$  are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills)  $=h$ , and  $\frac{1}{2}$  the roadbed  $=w$ , add the triangles formed by taking the distance out to each break in turn ( $=w$ 's) by the difference between the cuts (or fills) on each side of it ( $=h$ 's) always subtracting the outer from the inner.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide.

Side Slopes 1 on 1 1/2.

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be  $41.9+(20-16)+2$  or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.