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SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF SAN FRANCISCO

DEWAYNE JOHNSON,
Plaintiff,
vs. Case No. CGC-16-550128
MONSANTO COMPANY, et al.,
Defendants.

-----/

Proceedings held on Monday, July 30, 2018,
Volume 19, Morning Session, before the Honorable
Suzanne R. Bolanos, at 9:44 a.m.

REPORTED BY:
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EXHIBITS ADMITTED

(None.)

Monday, July 30, 2018

9:44 a.m.

Volume 19

Morning Session

San Francisco, California

Department 504

Judge Suzanne Ramos Bolanos

PROCEEDINGS

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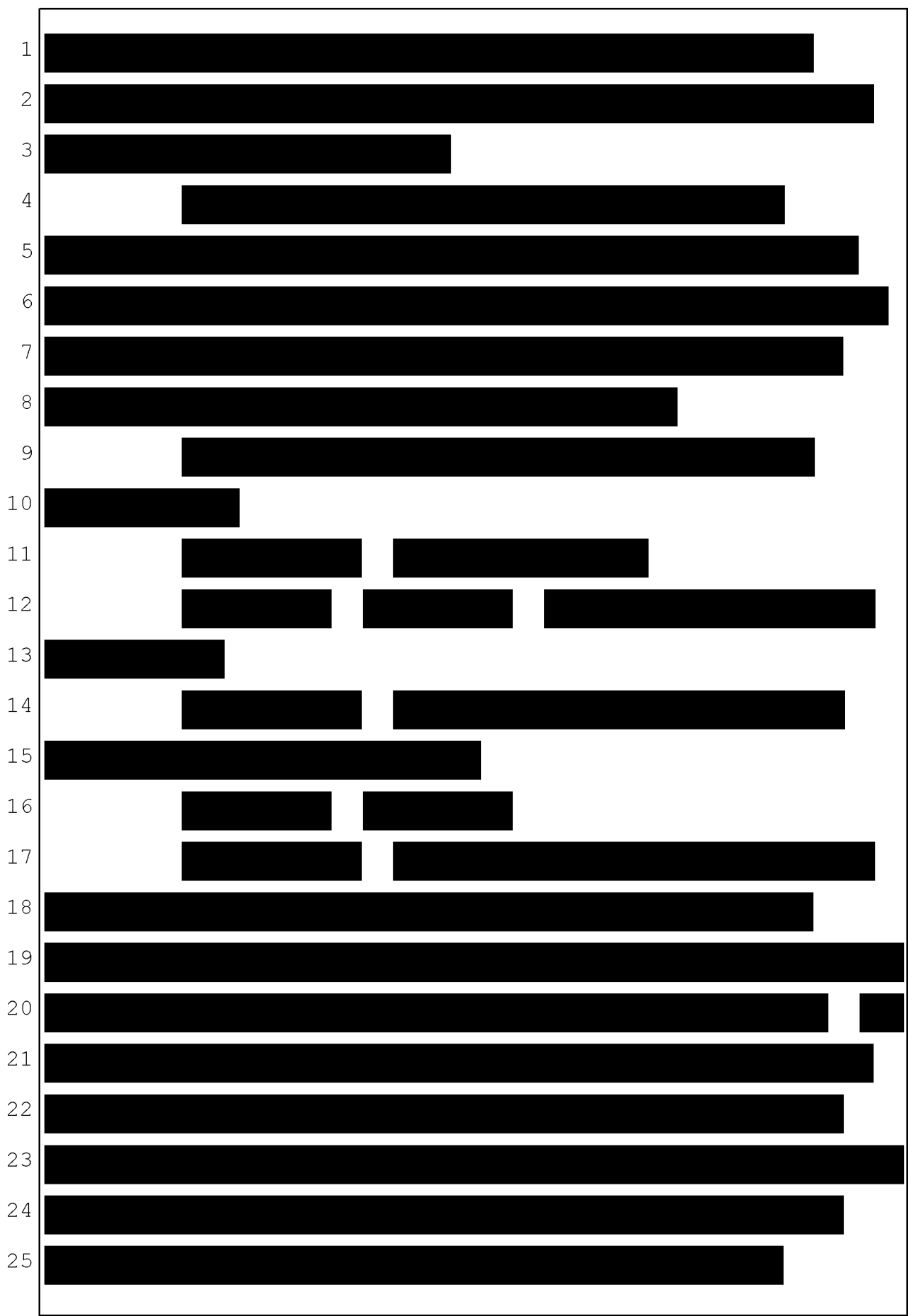
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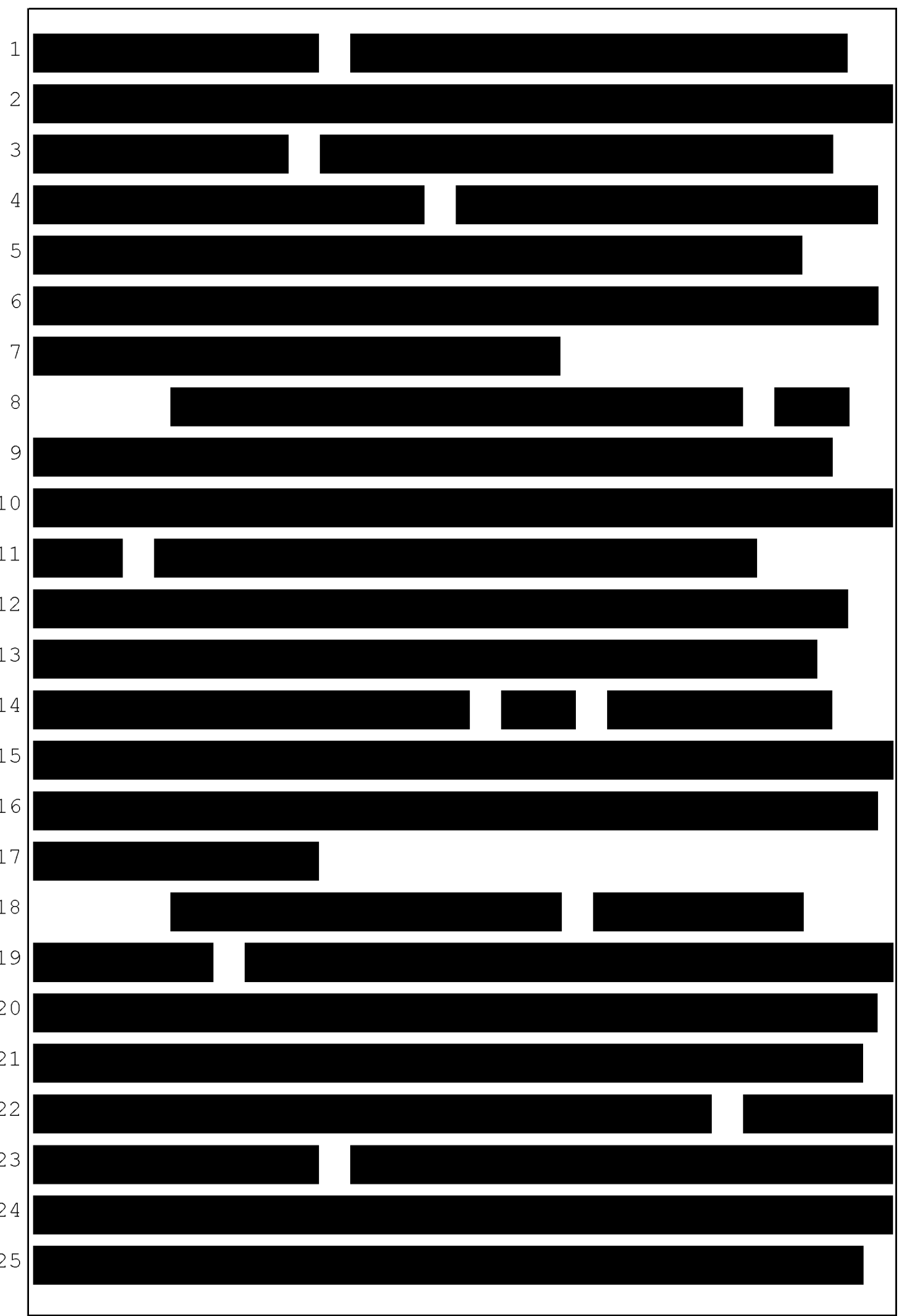
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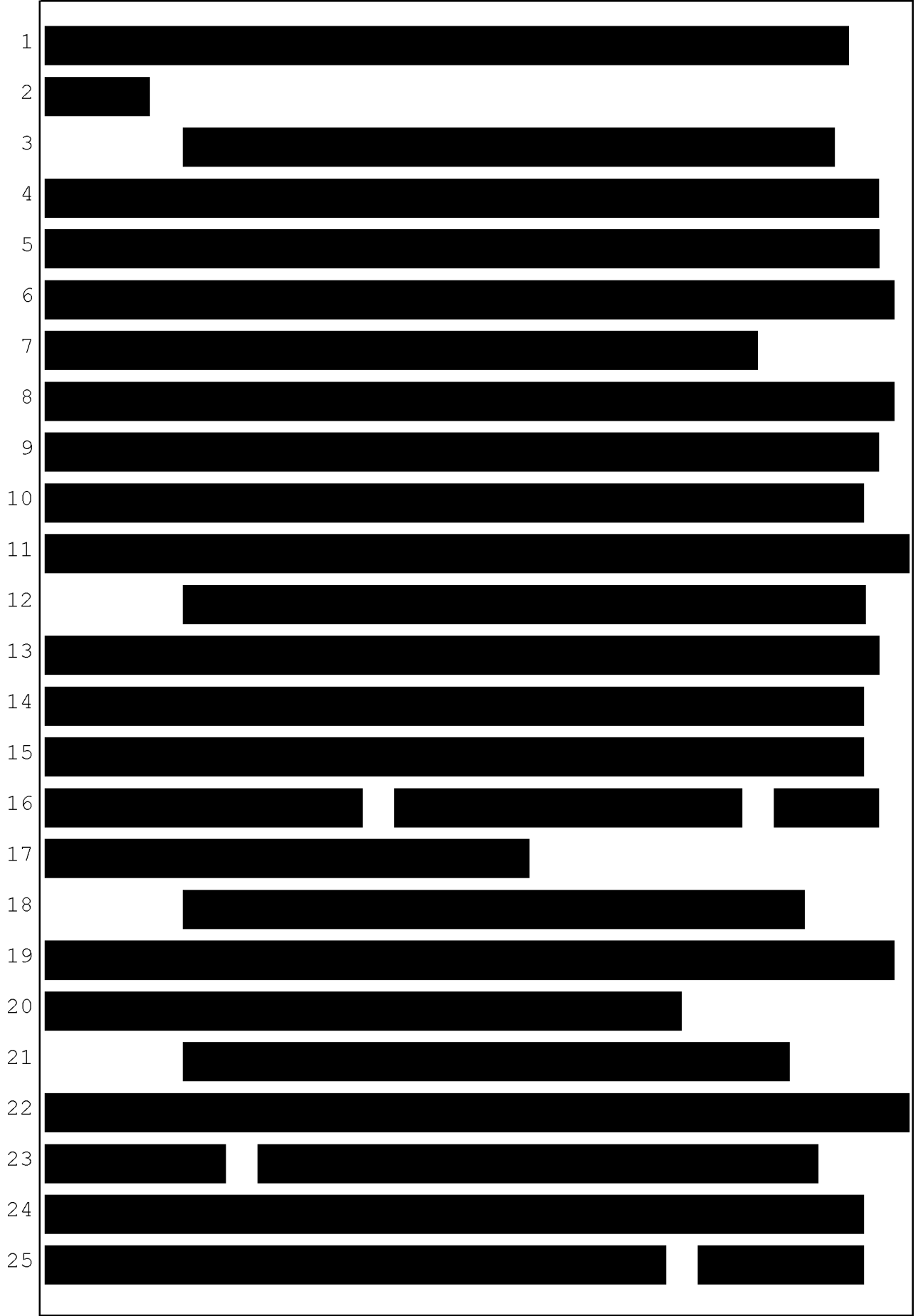
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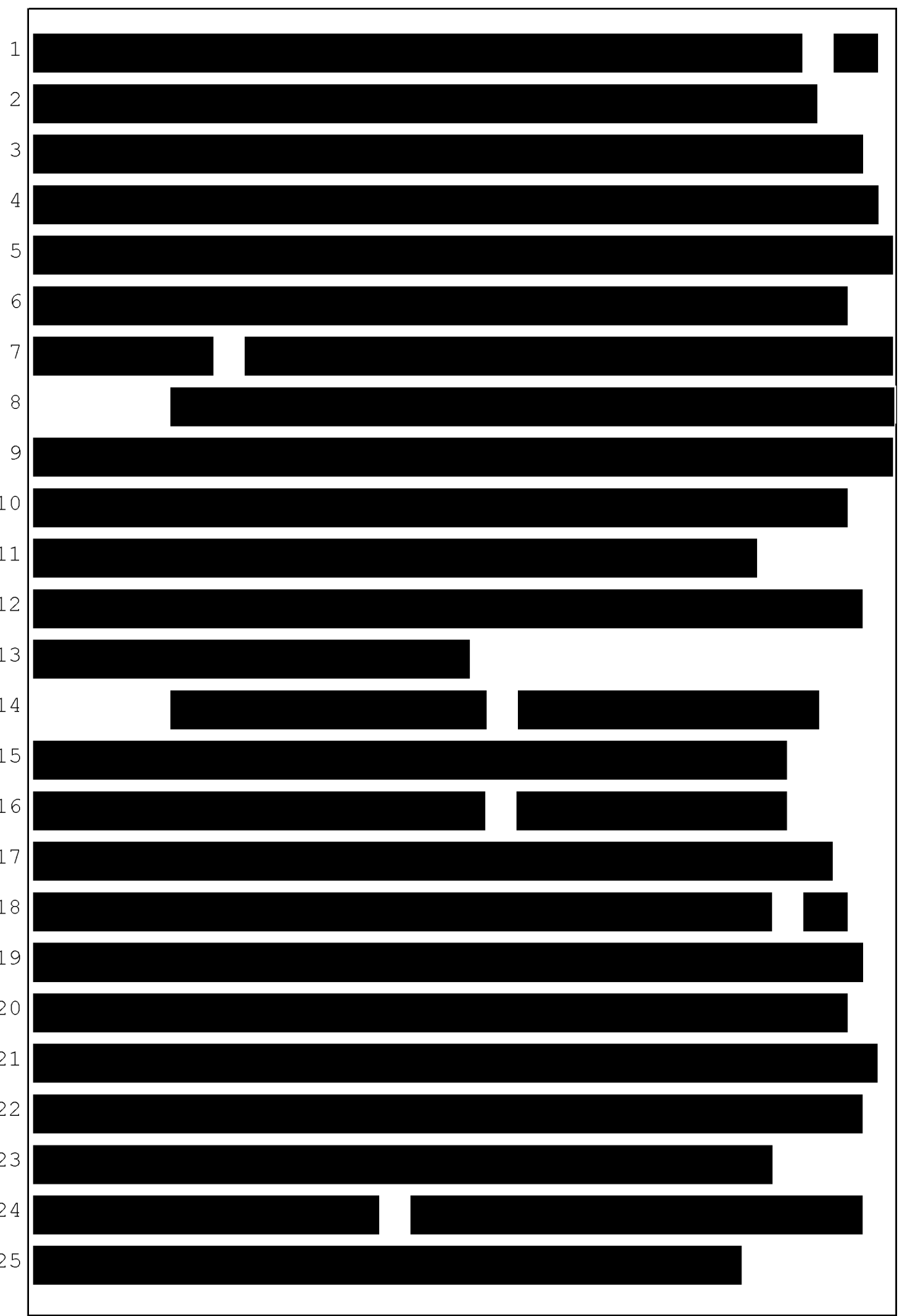
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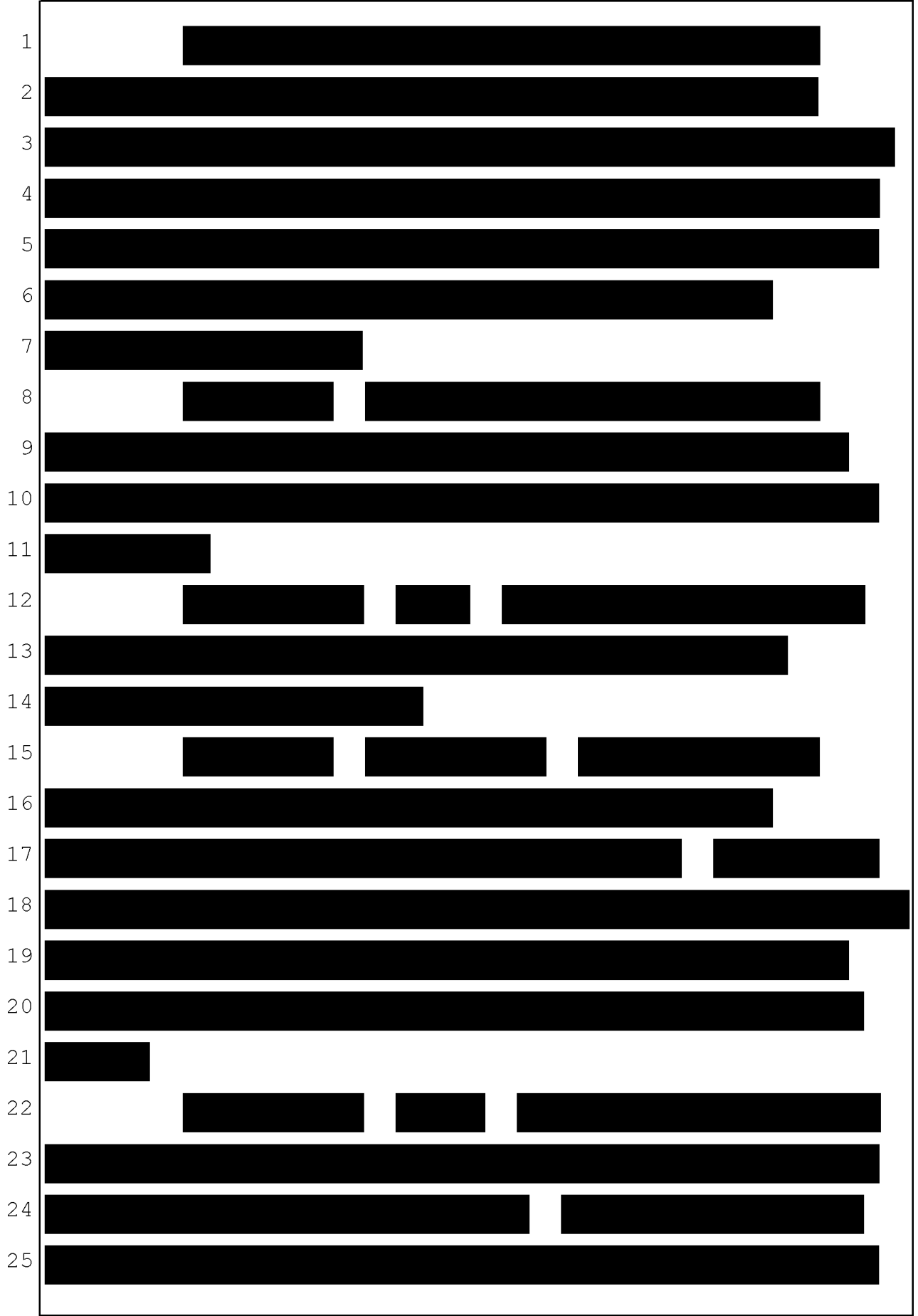
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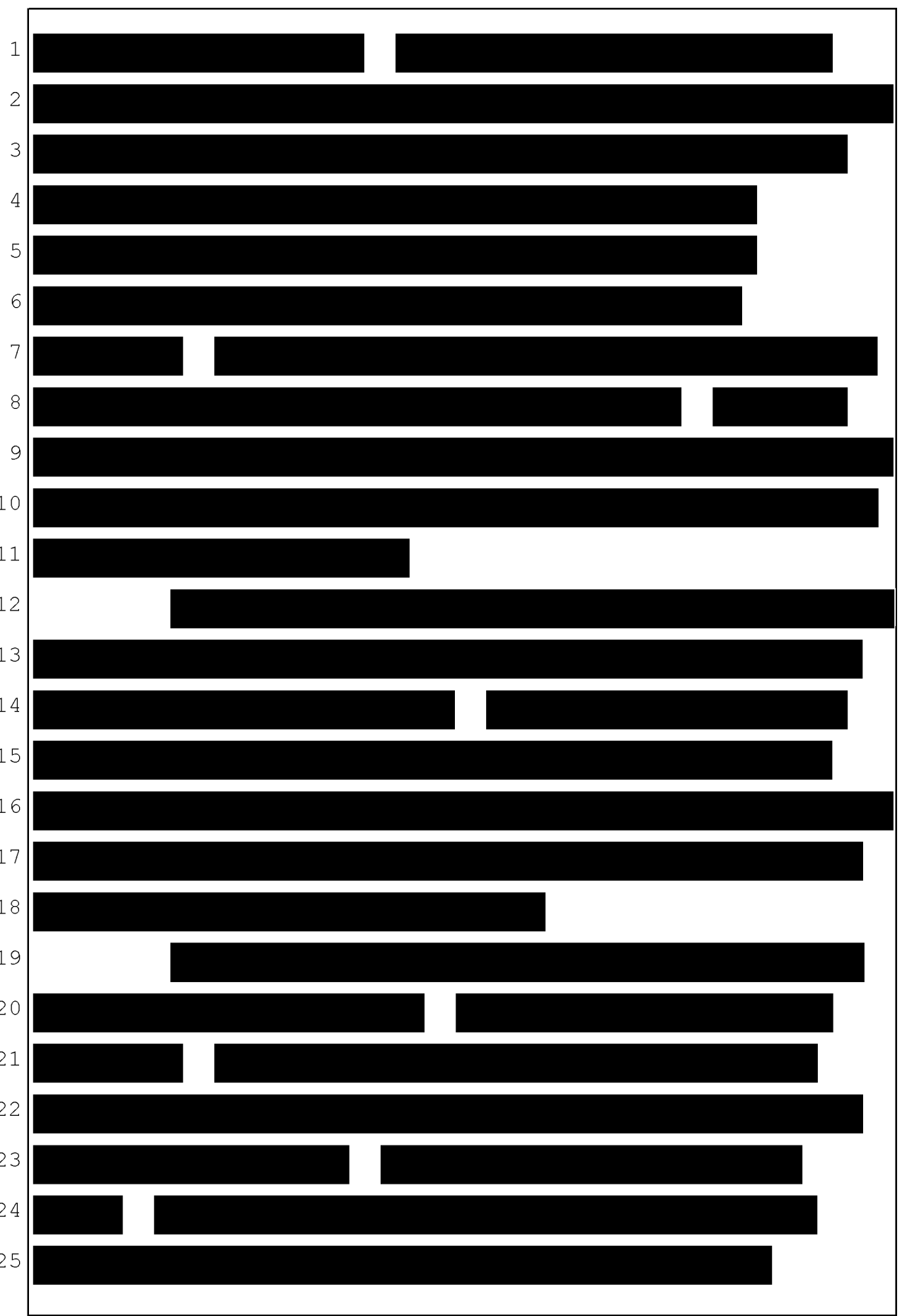
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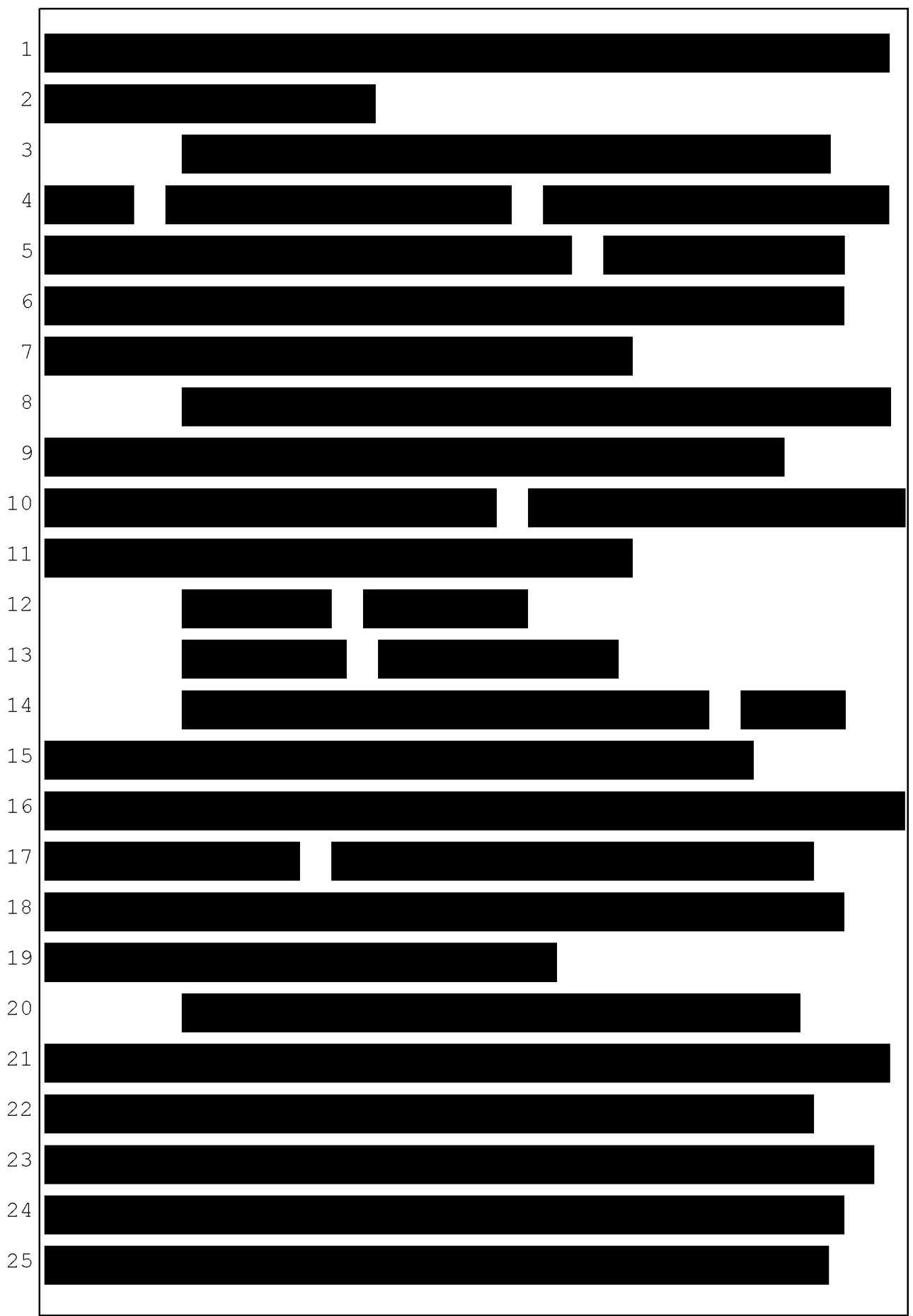
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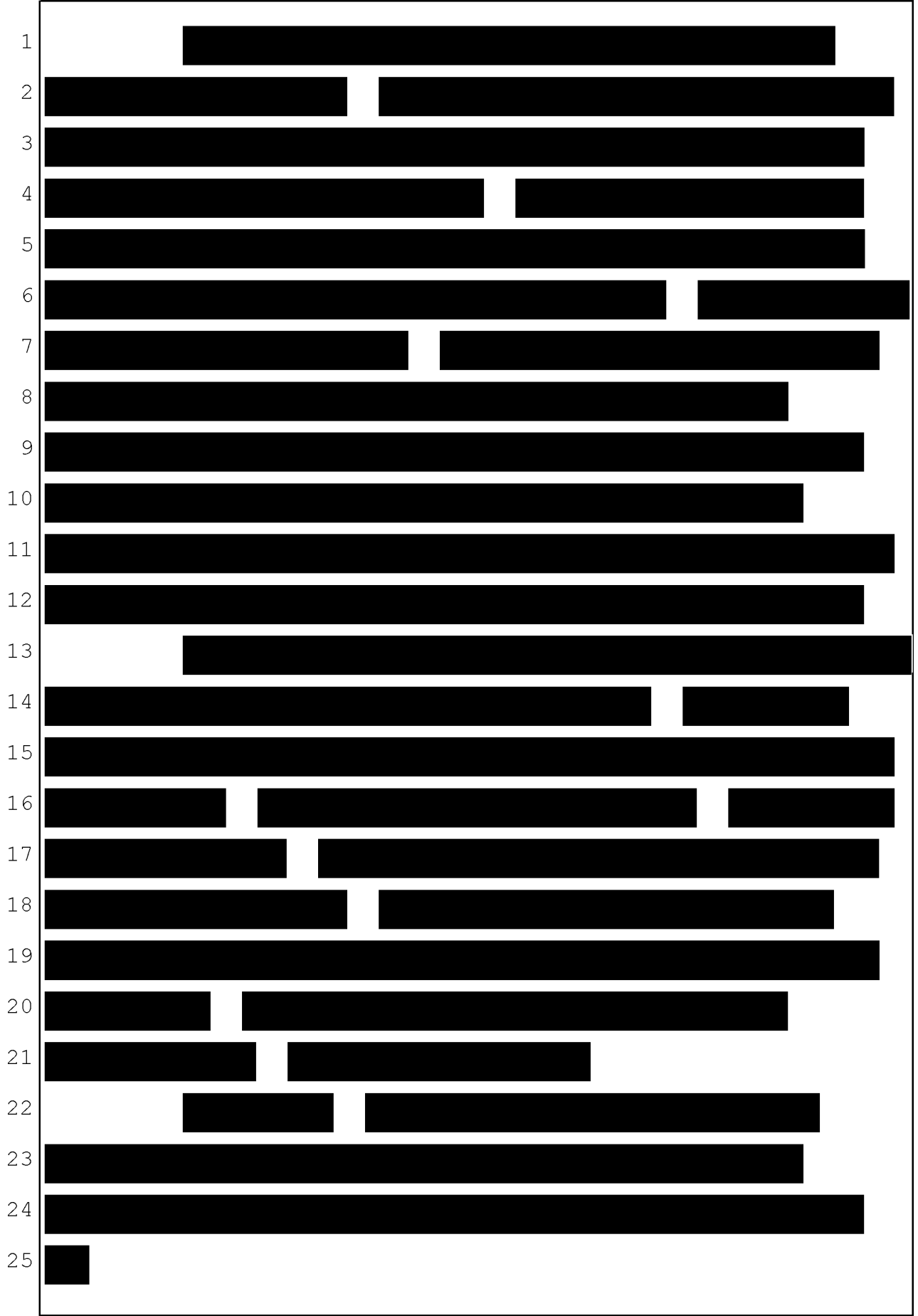
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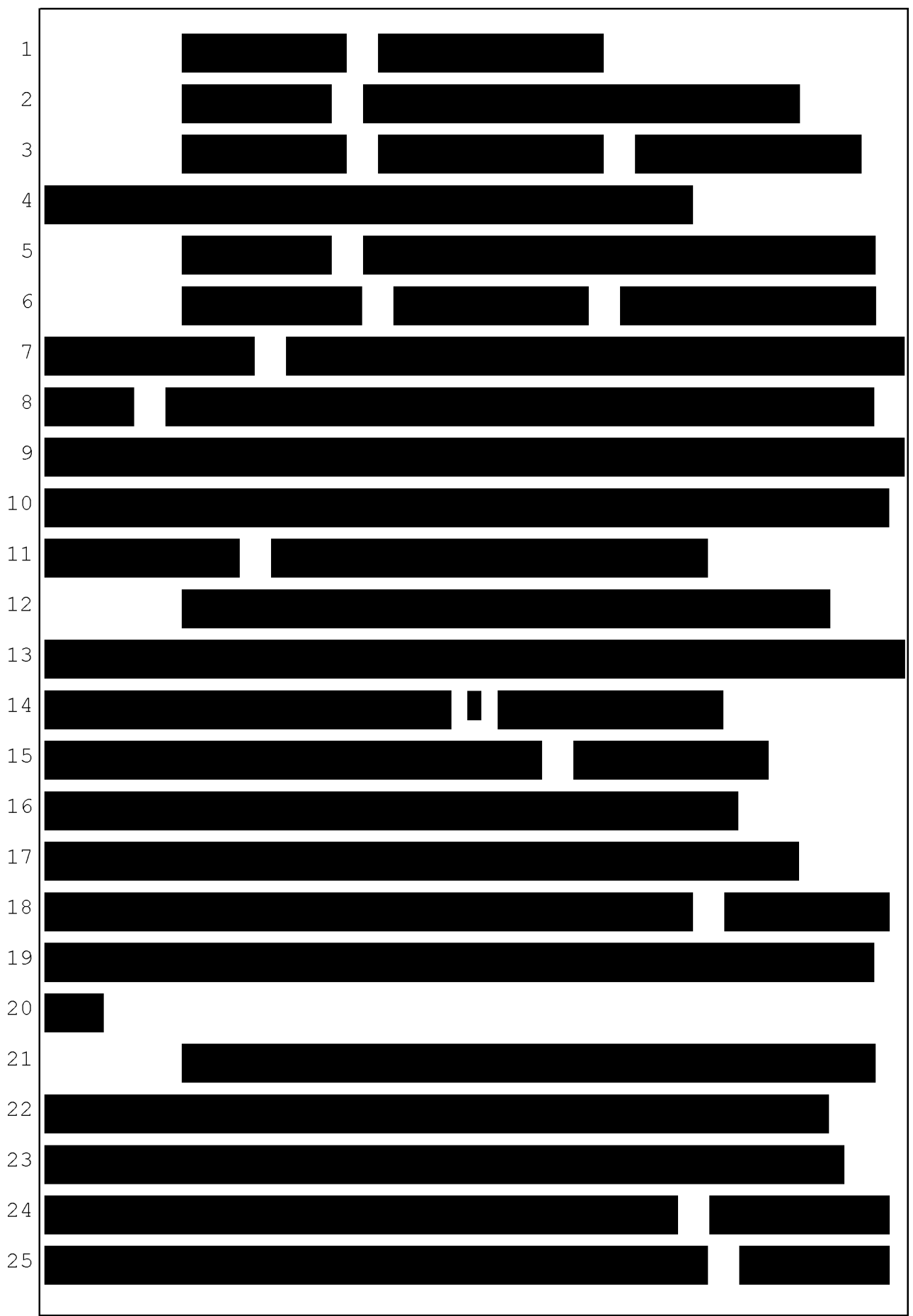


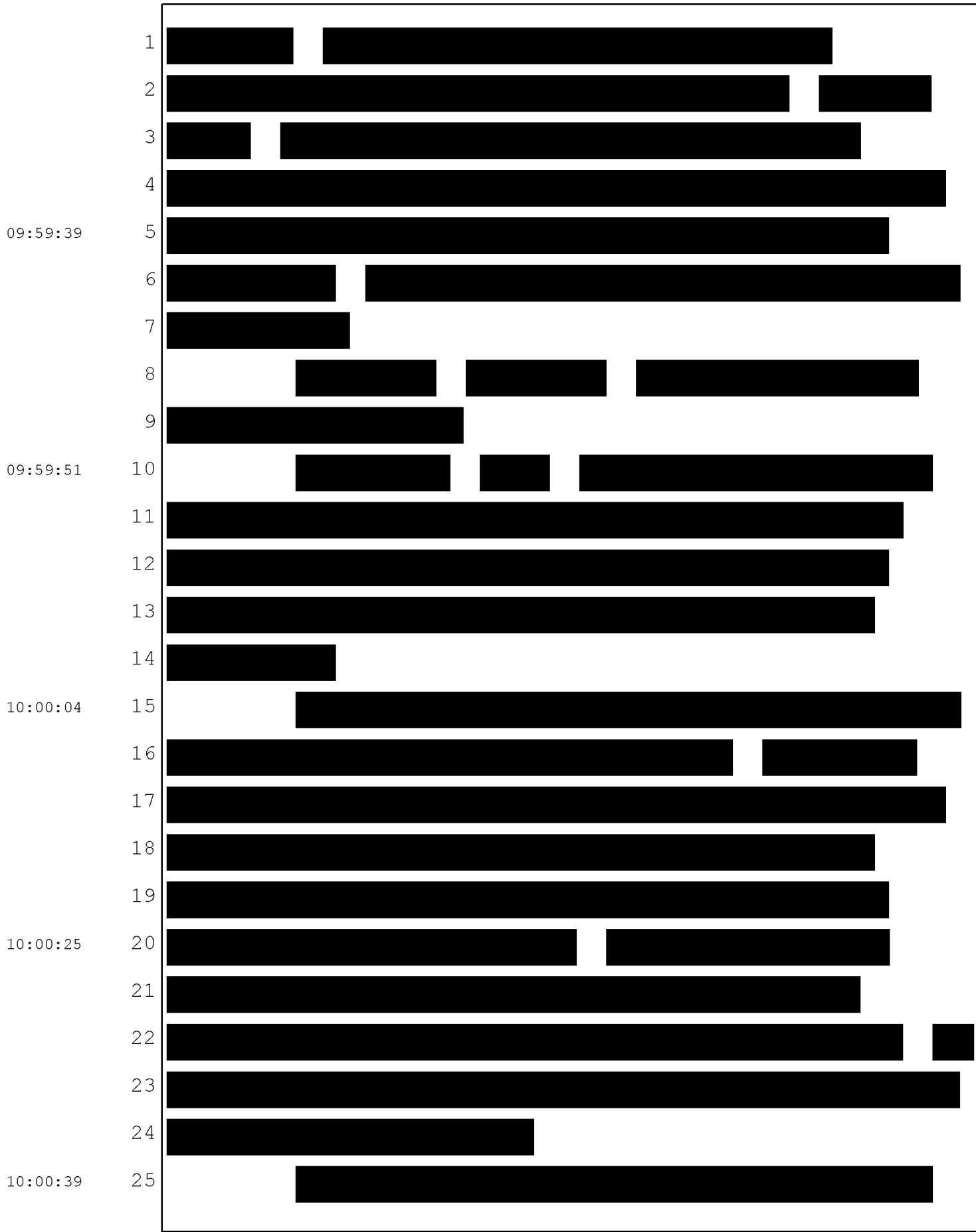
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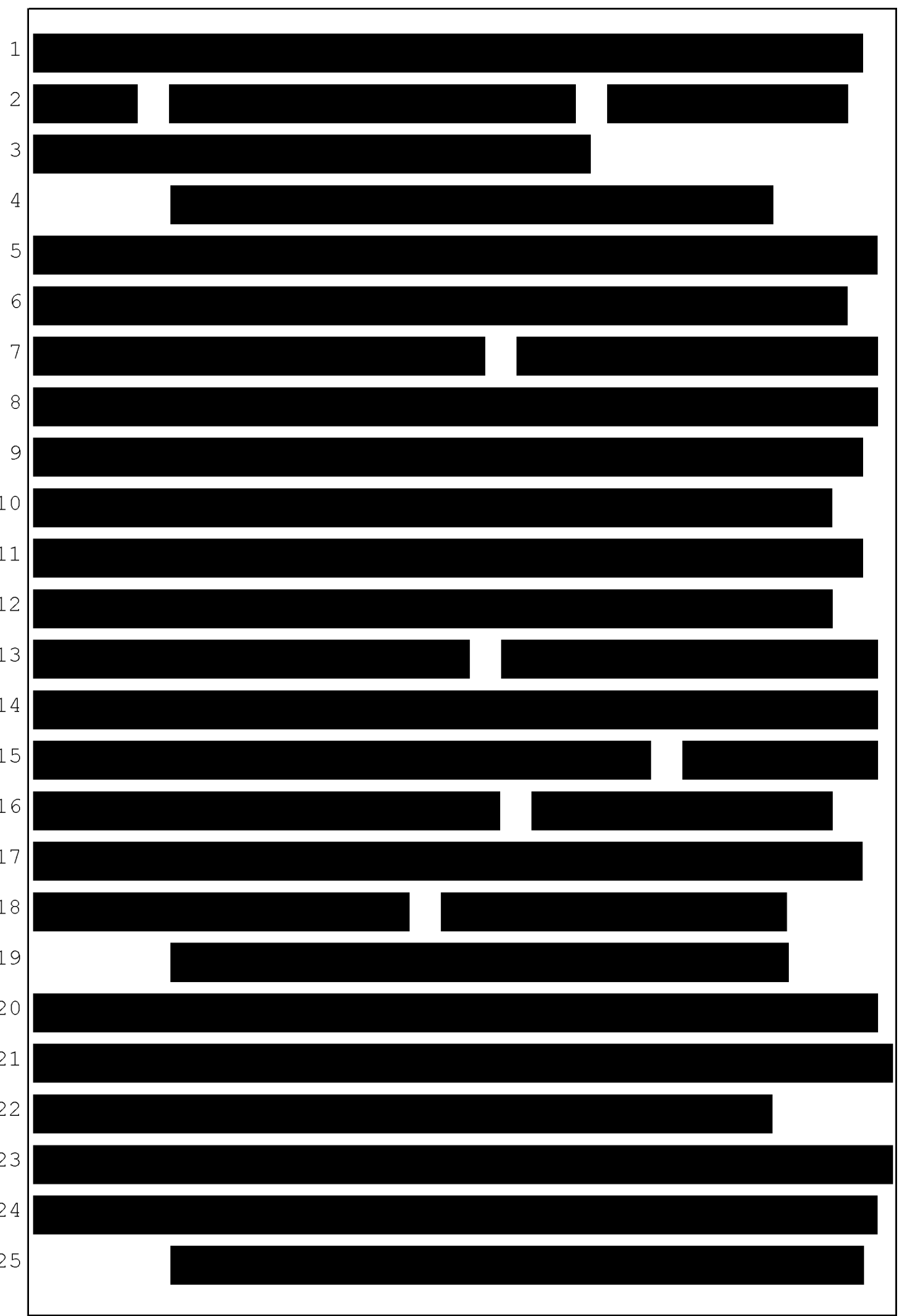
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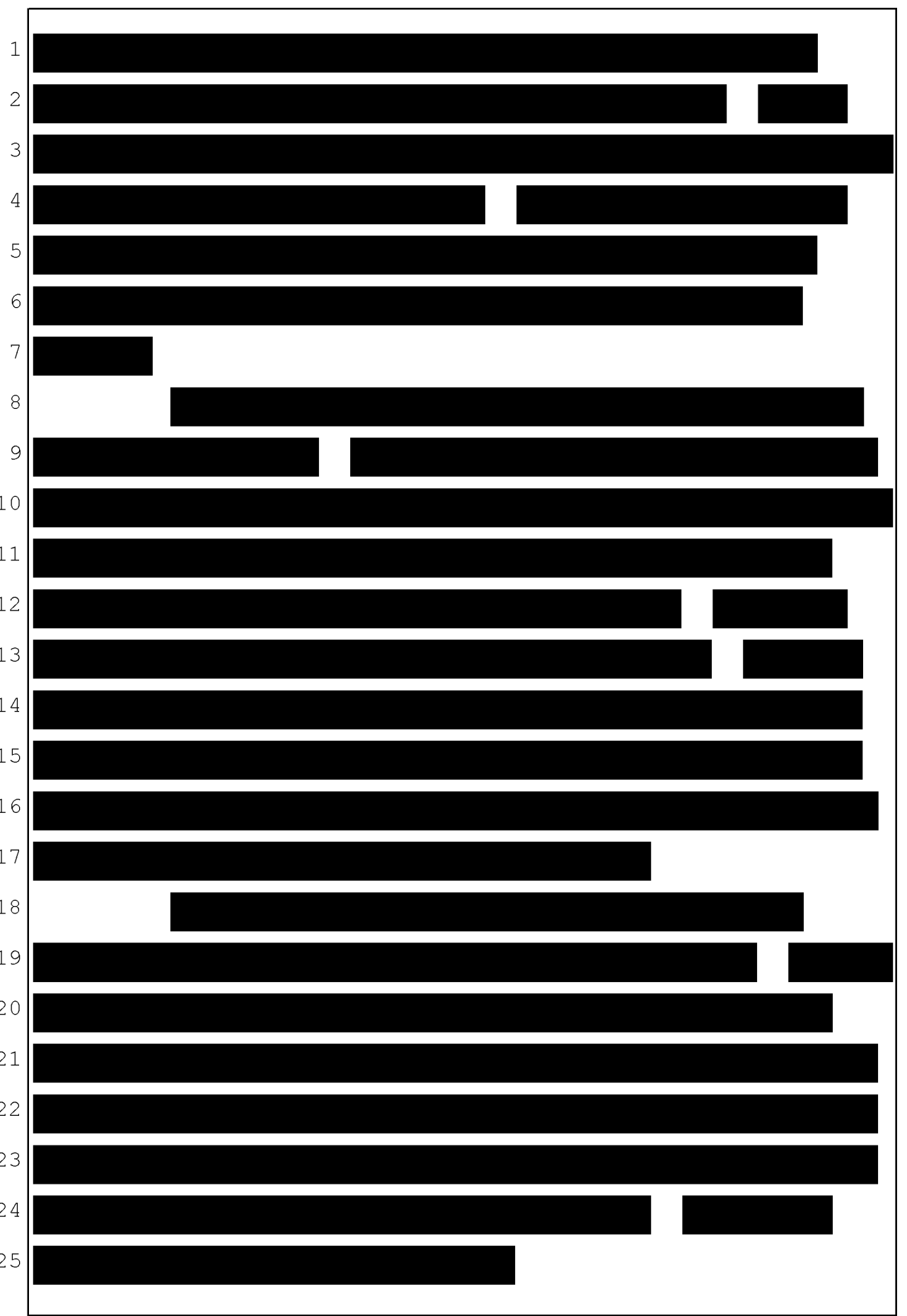
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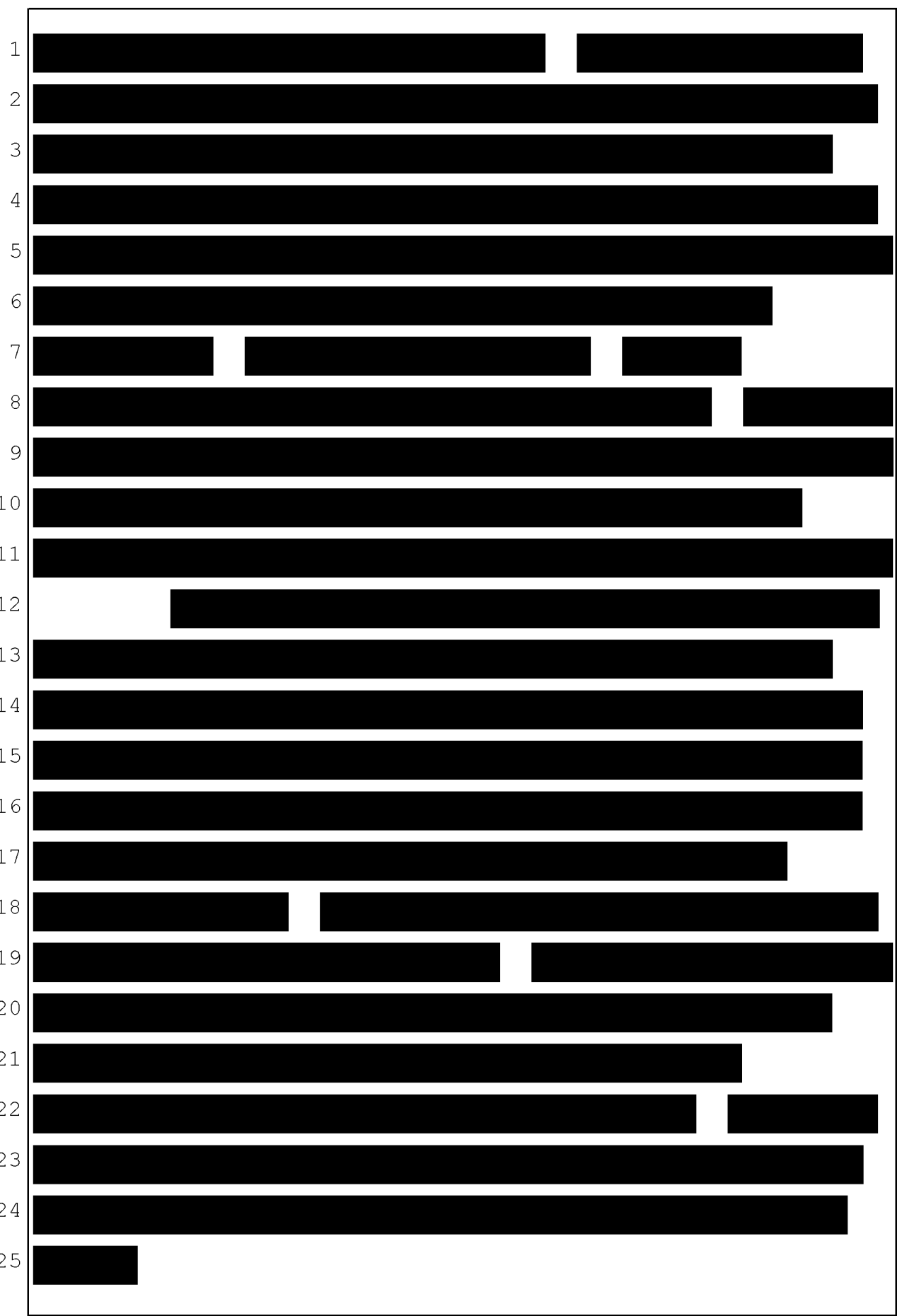
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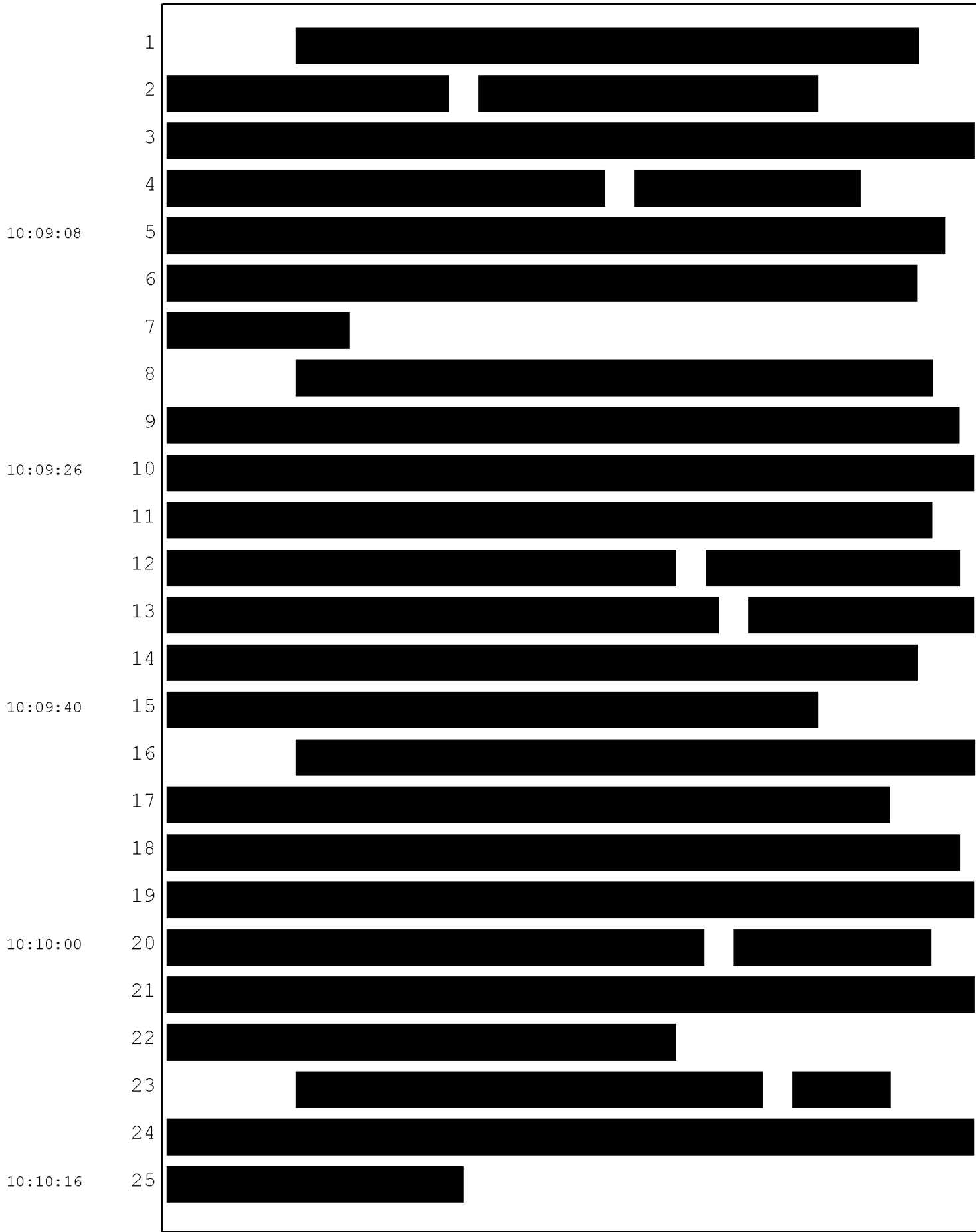
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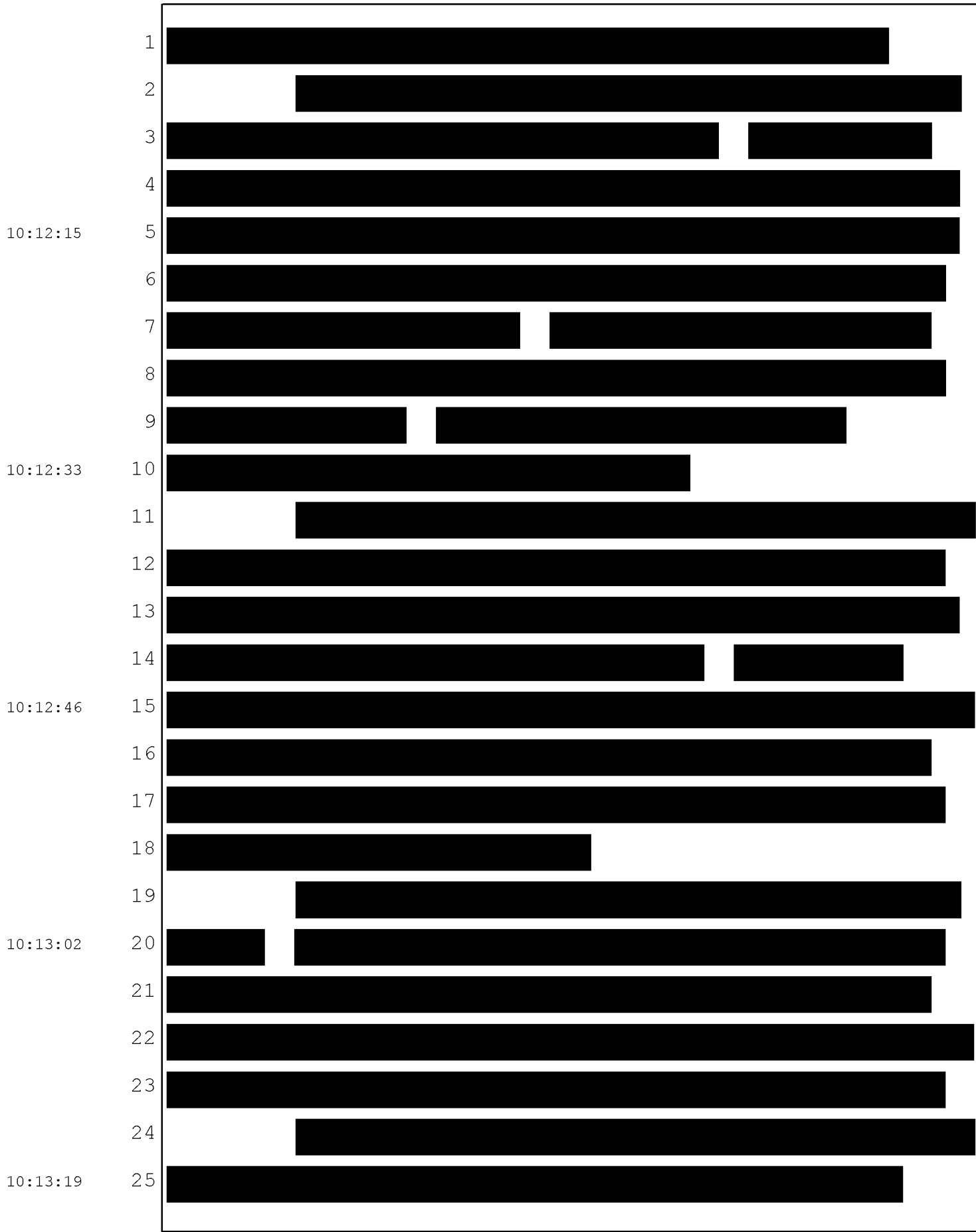
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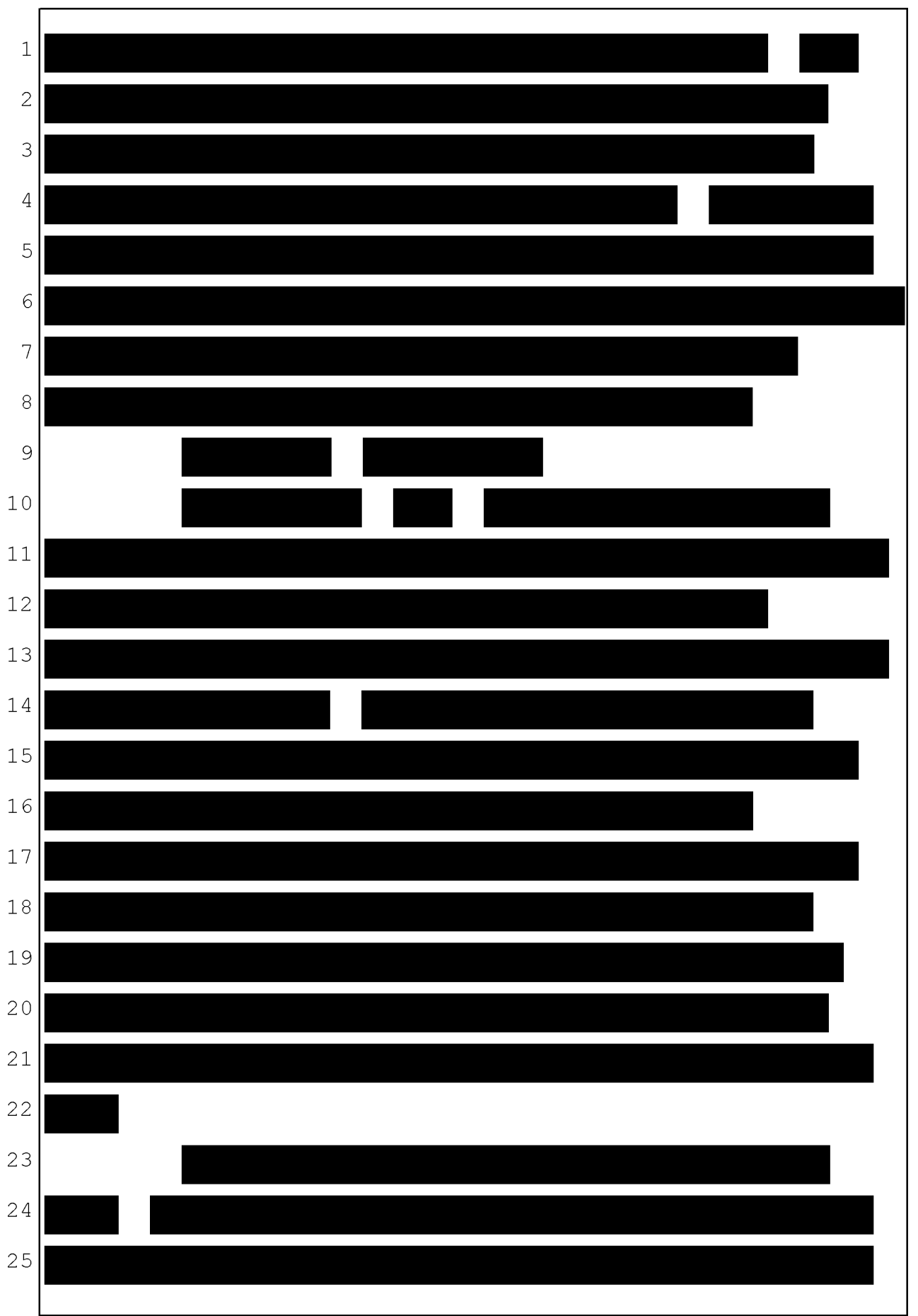
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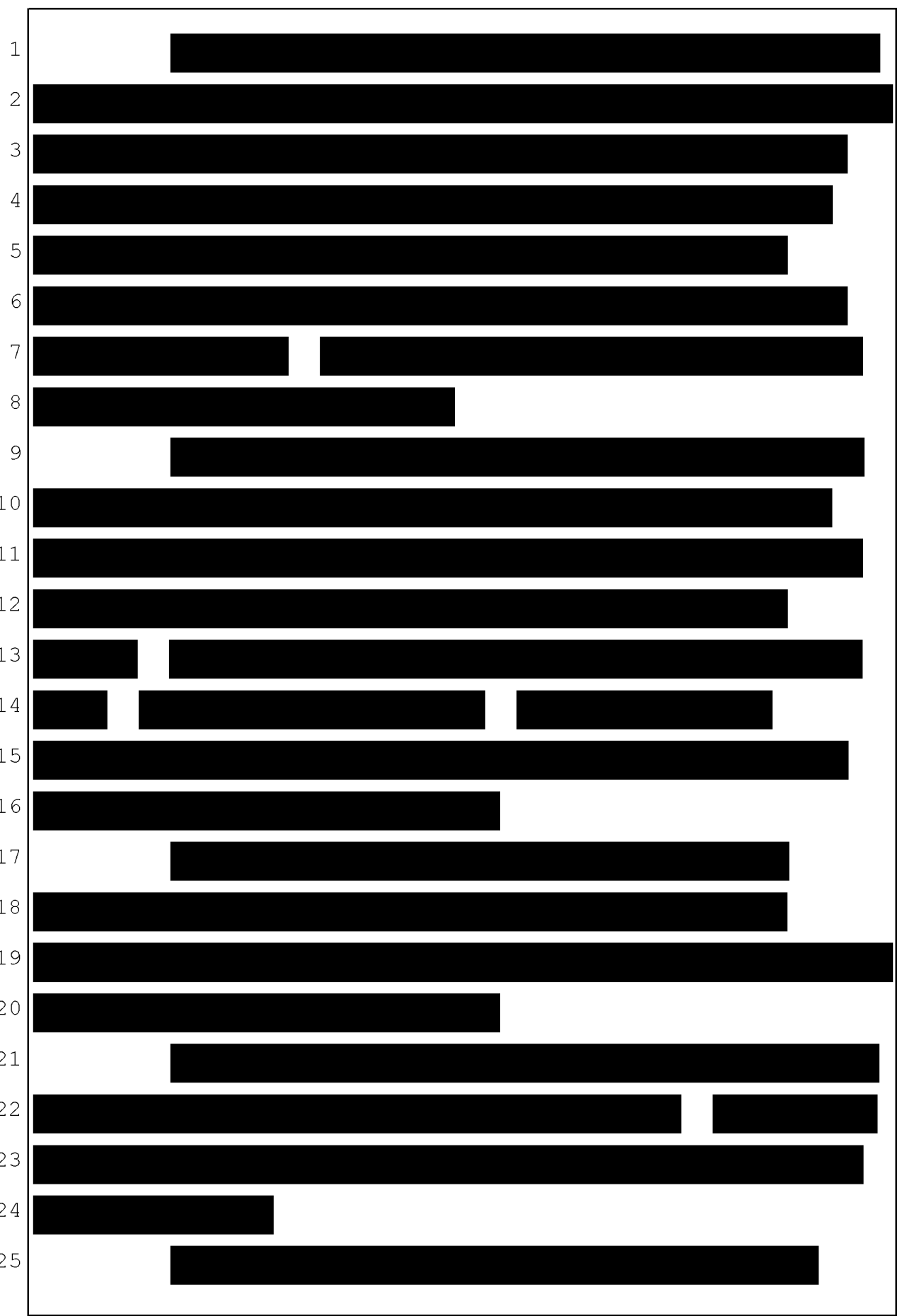
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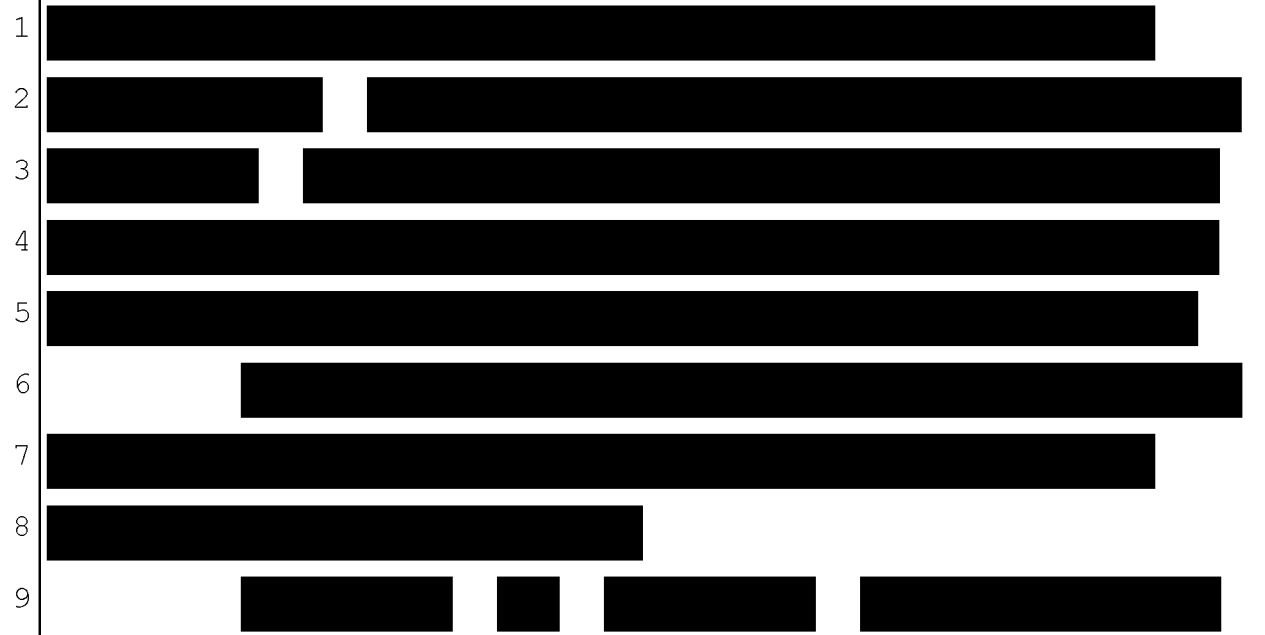
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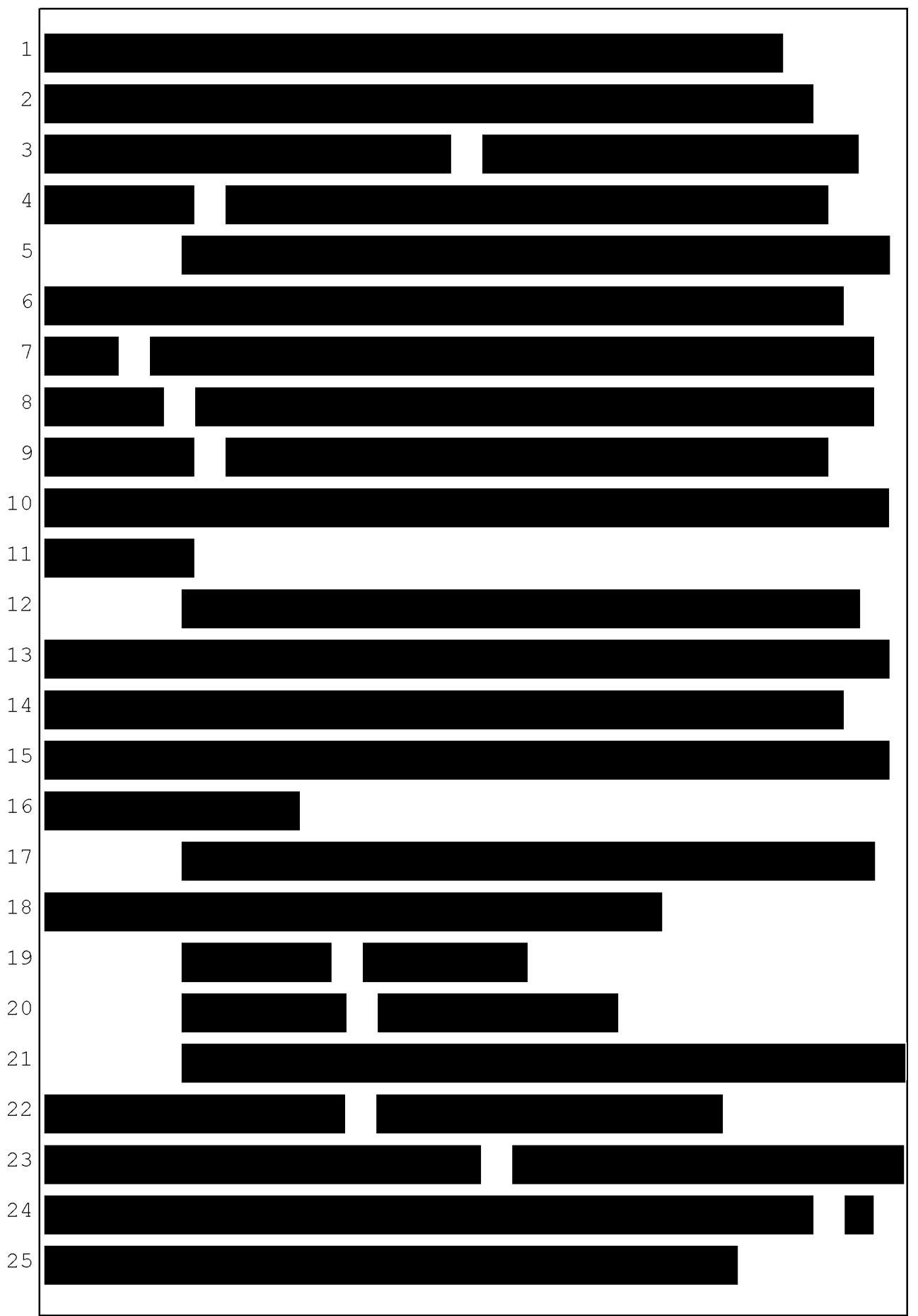
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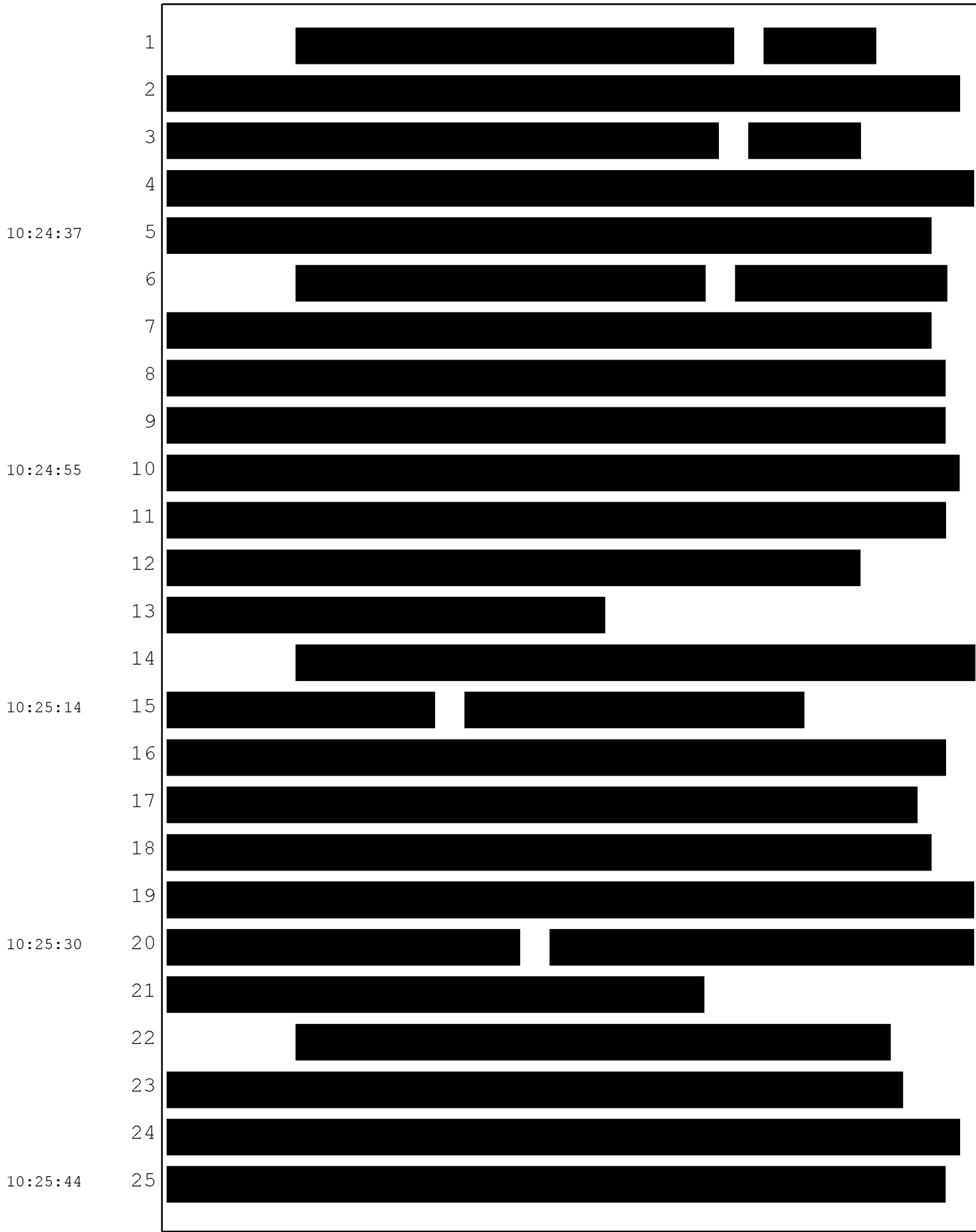
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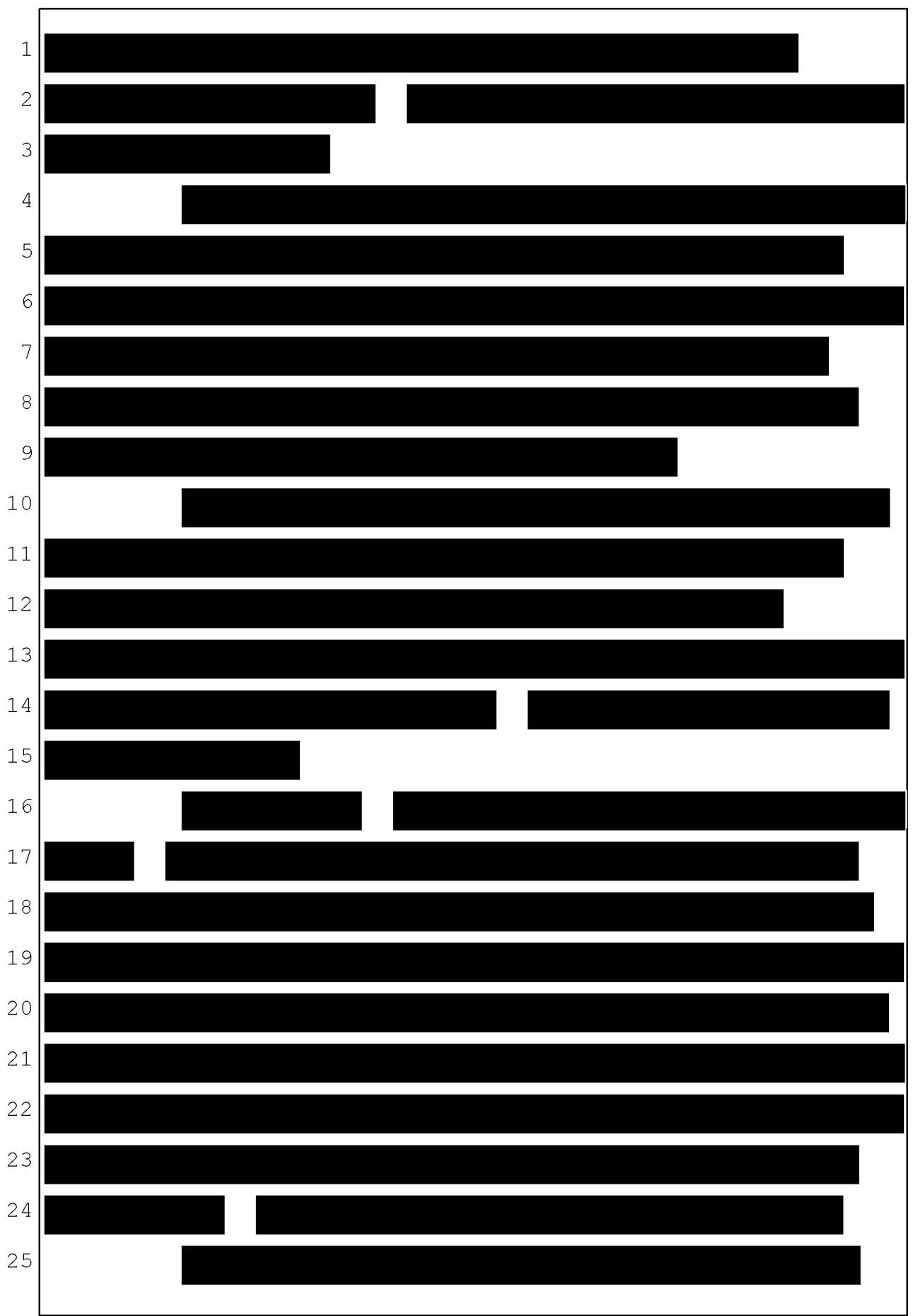
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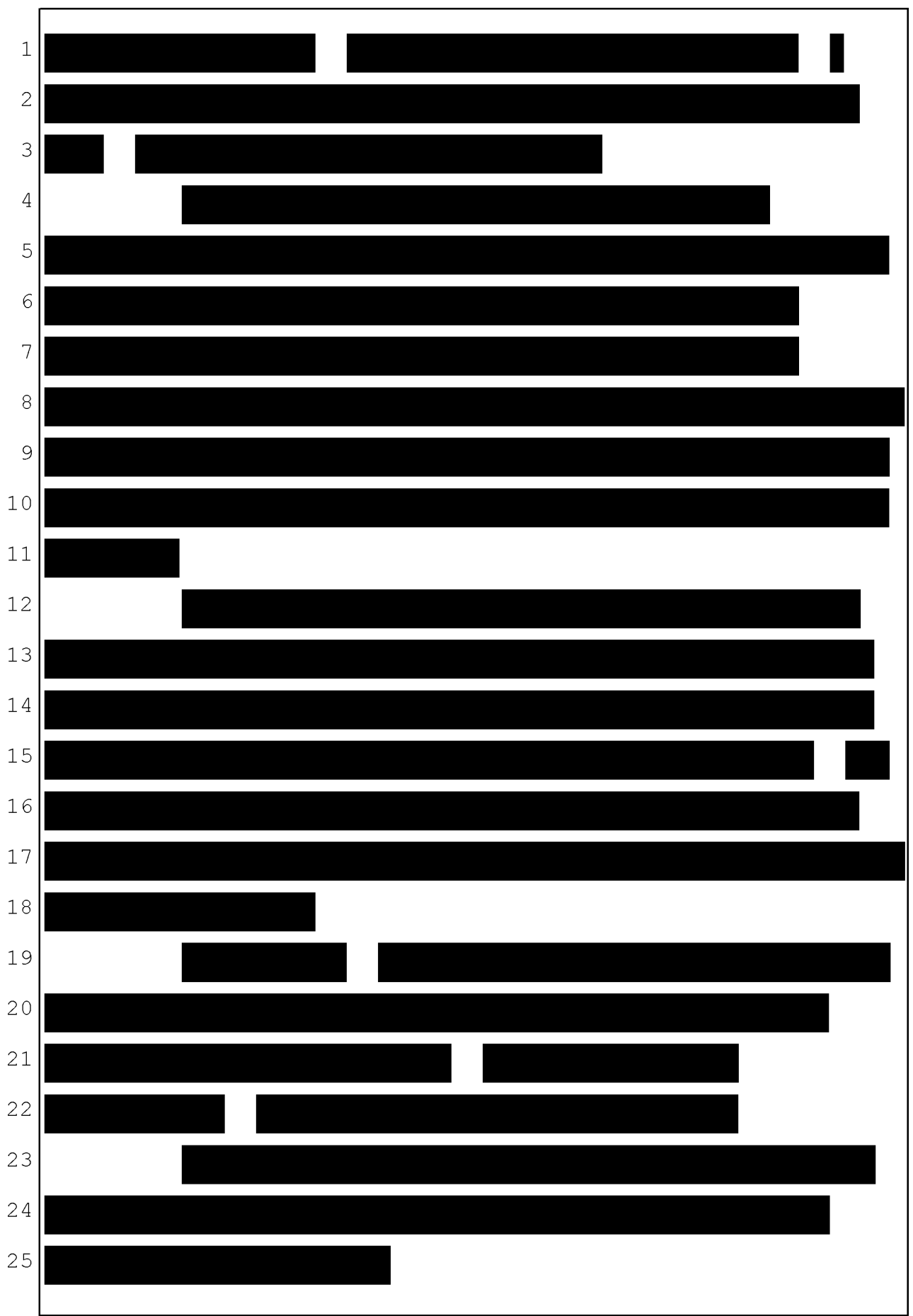
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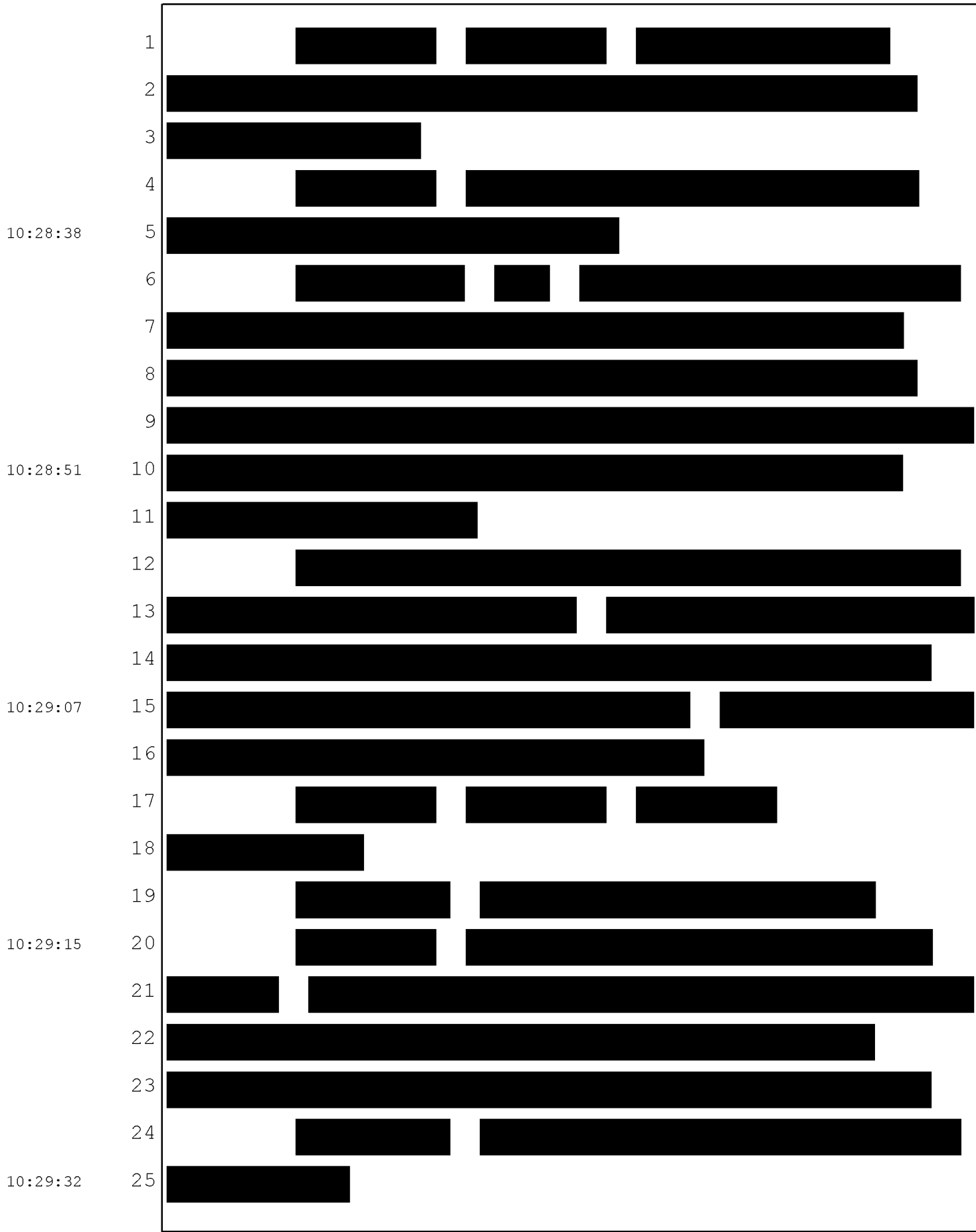
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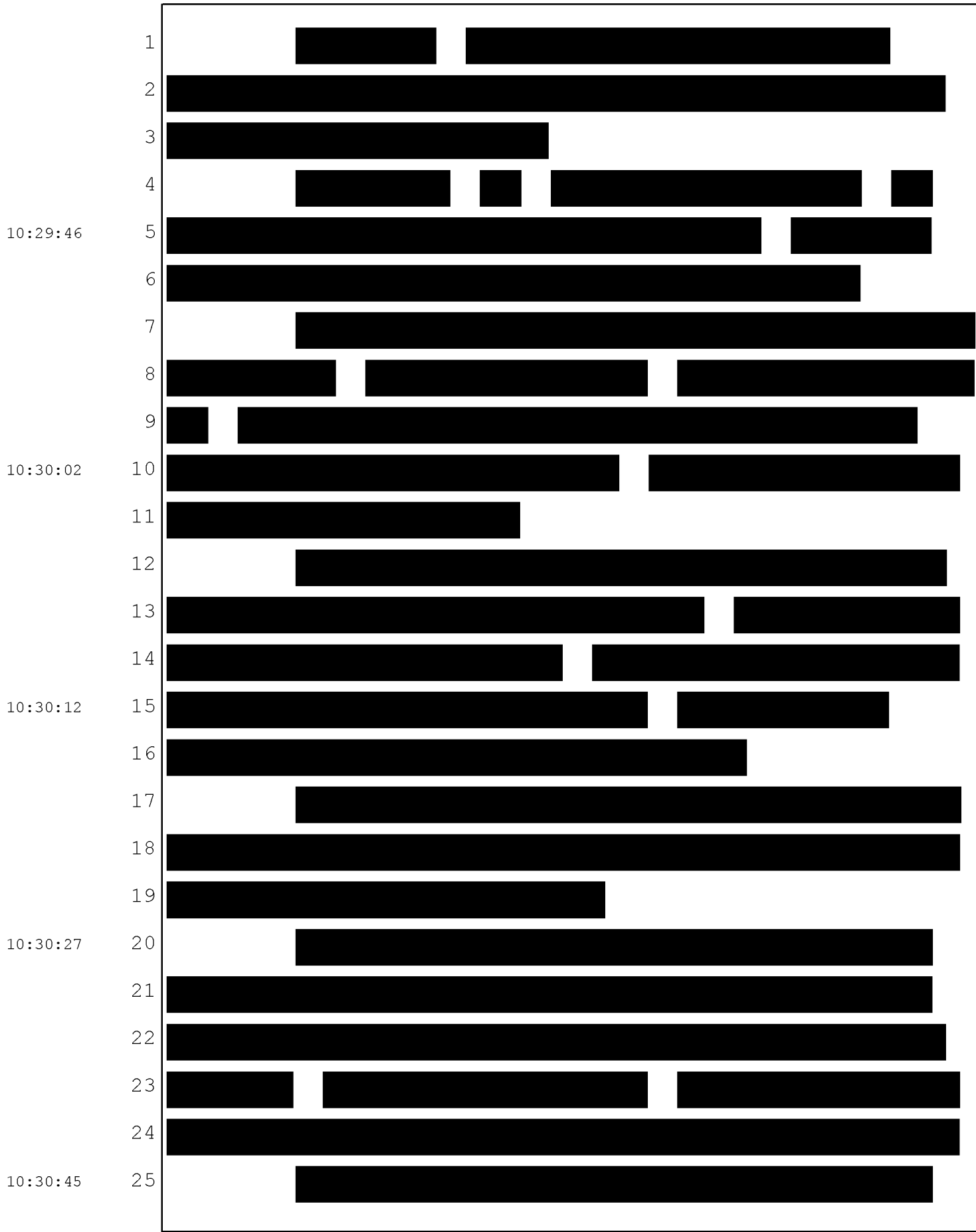
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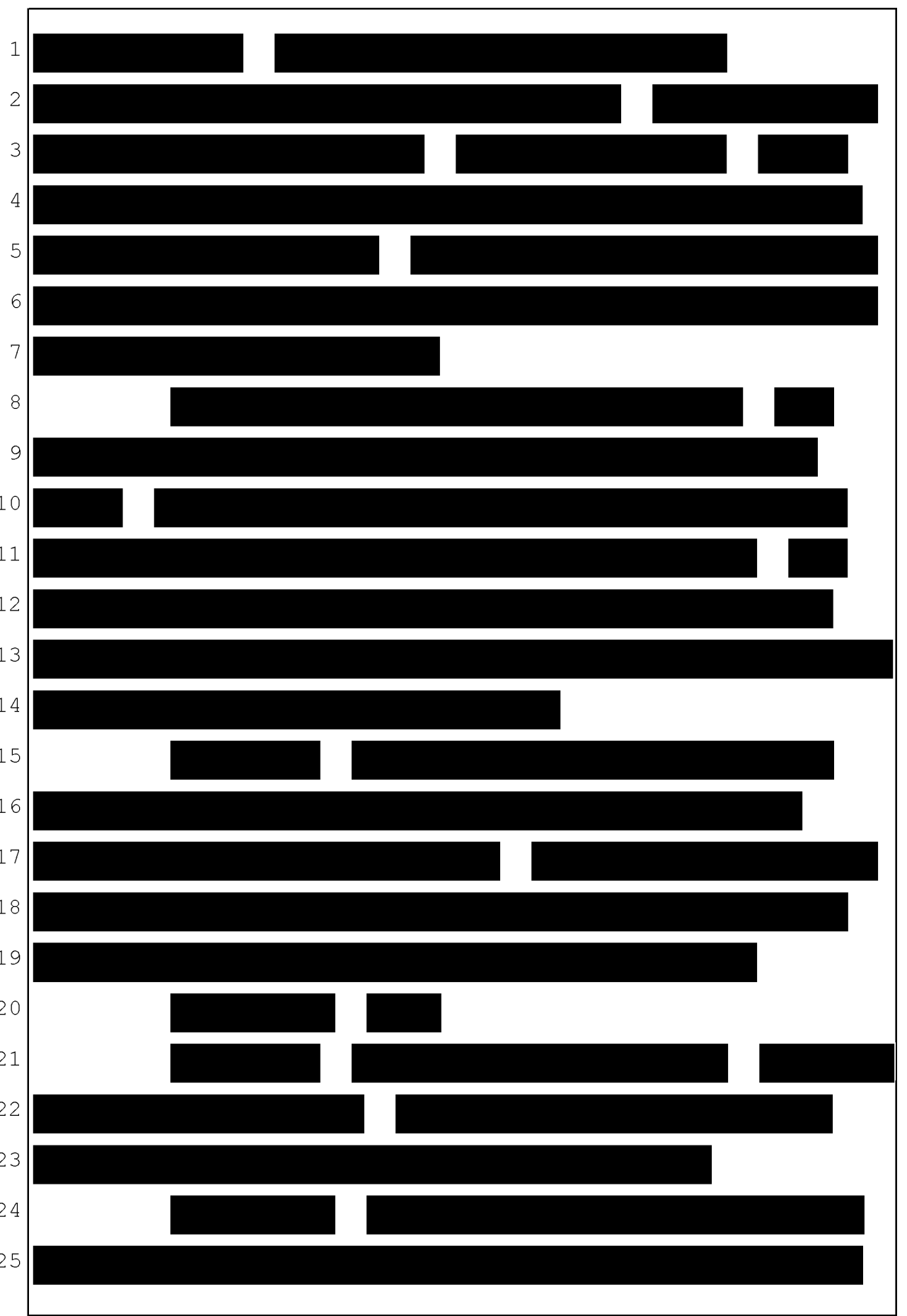
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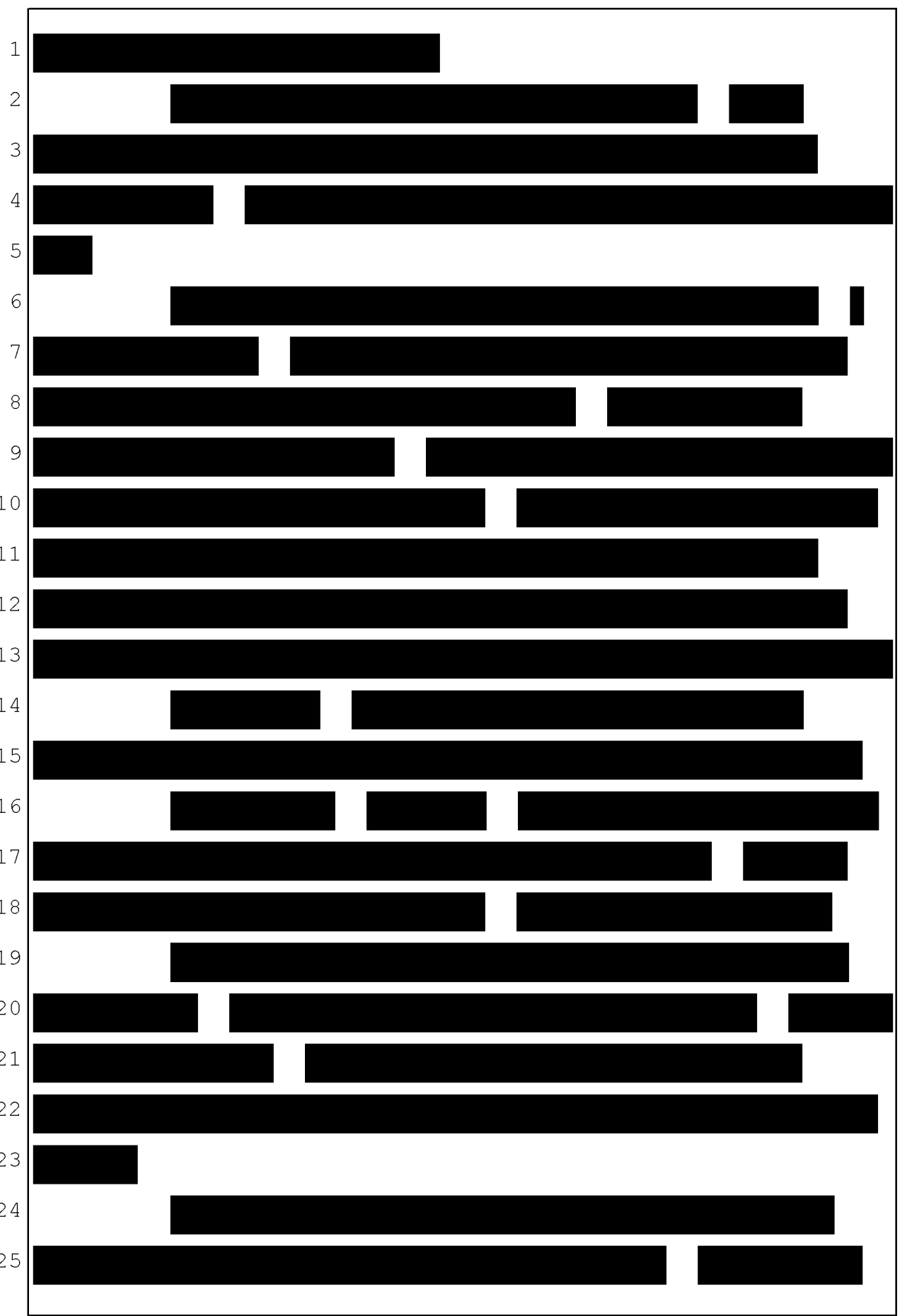
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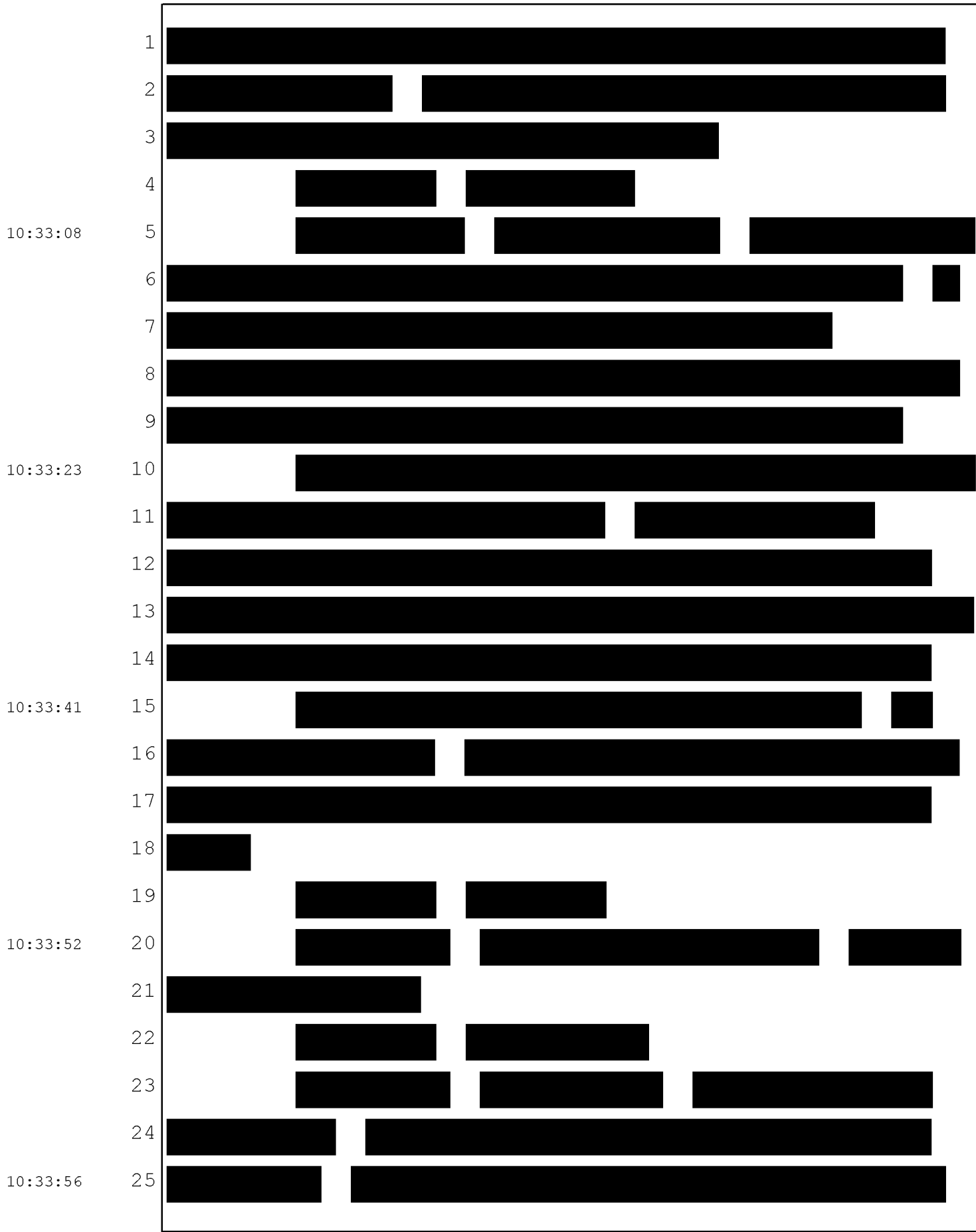
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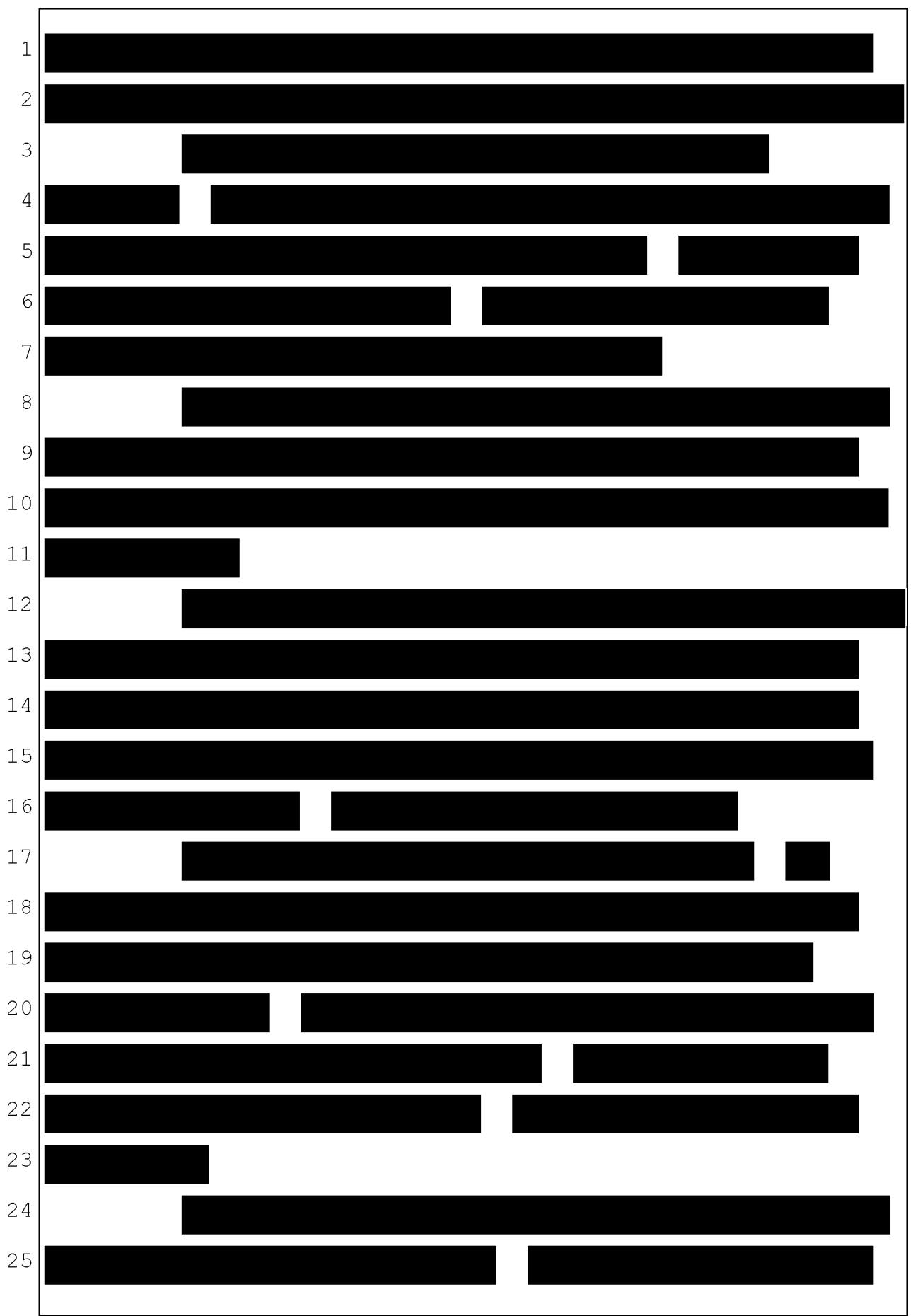
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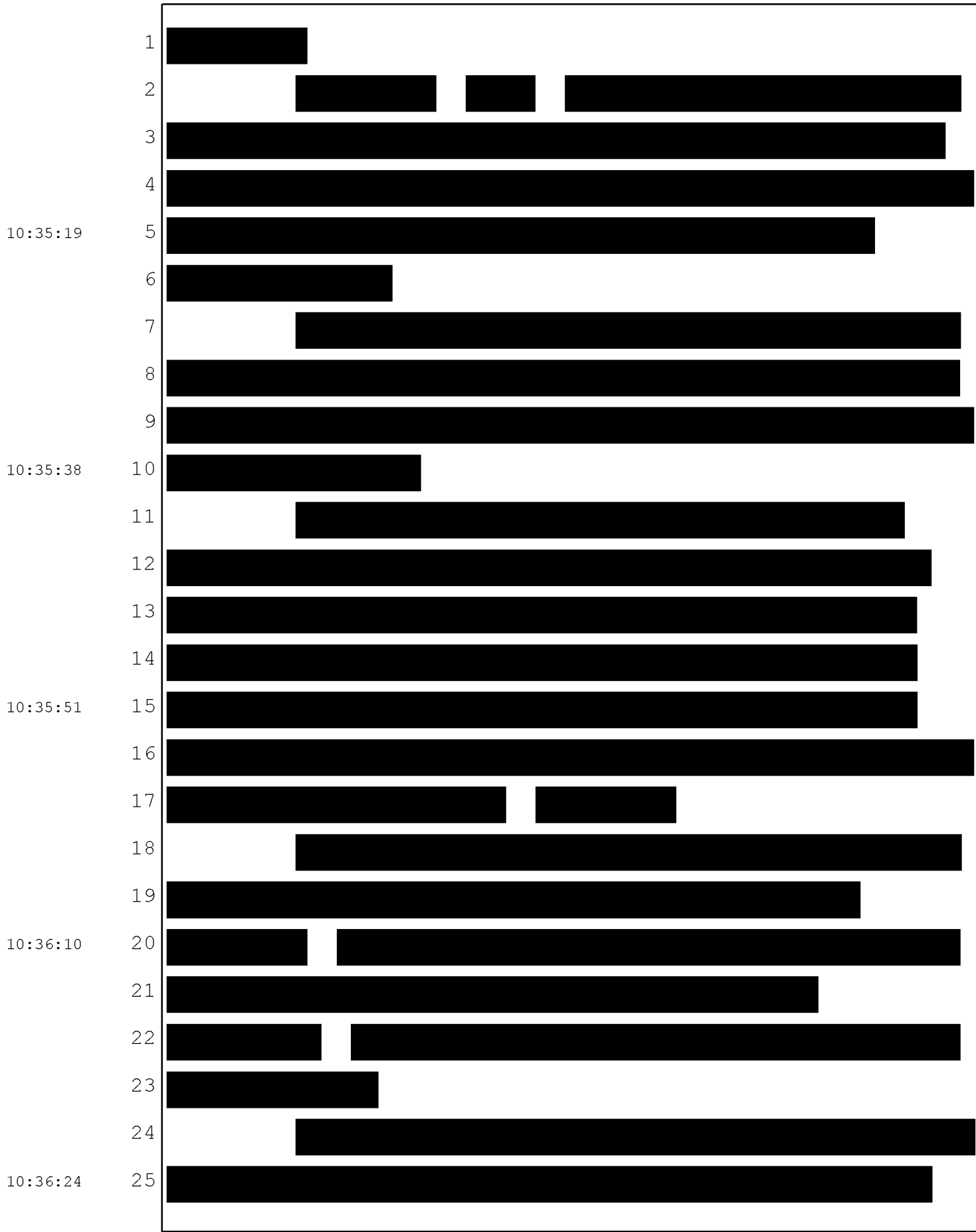
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10:39:15

21 [REDACTED]
22 (Jury enters courtroom.)
23 THE COURT: Good morning and welcome, Ladies and
24 Gentlemen. I hope everyone had a good weekend.
25 We are now going to continue with Monsanto's

1 case. So this morning Monsanto will begin by calling
2 their first witness.

3 And Ms. Edwards, you may proceed.

10:39:34

4 MS. EDWARDS: Yes, your Honor. We'd like to
5 call Dr. Al-Khatib to the stand.

6 THE COURT: Very well.

7 Good morning, Dr. Al-Khatib. If you would
8 please step up here and remain standing while the clerk
9 swears you.

10:40:13

10 If you could please remain standing, sir, while
11 the clerk swears you in.

12

13 KASSIM AL-KHATIB,

14 having been first duly sworn, was examined
15 and testified as follows:

16

17 THE CLERK: Would you please state and spell
18 your name for the record.

10:40:33

19 THE WITNESS: My name is Kassim Al-Khatib. Do
20 you want me to spell it? K-A-S-S-I-M. Last name
21 Al-Khatib, A-L K-H-A-T-I-B, as in boy.

22 THE COURT: Thank you. You may proceed,
23 Ms. Edwards.

24 DIRECT EXAMINATION

10:40:46

25 BY MS. EDWARDS:

1 Q. Good morning, Doctor. How are you?

2 A. Good morning. I'm fine, thank you.

3 Q. Can you start by introducing yourselves to the
4 jury, please?

10:40:55

5 A. Yes. I'm Kassim Al-Khatib, as I said. I'm a
6 professor -- endowed professor at the University of
7 California at Davis.

8 Q. And what does an endowed professor mean?

9 A. Endowed professor means distinguished professor.

10:41:08

10 Q. And what exactly is a weed scientist, Doctor?

11 A. Well, weed science -- it's a science dealing
12 with weeds. So weeds are unwanted plants that interfere
13 with our economy, our health and animal health,
14 environment and natural resources.

10:41:28

15 So a weed scientist generally studies the
16 biology of weeds, how they grow, how they interact with
17 environment, and also managing and controlling of the
18 weeds, including using herbicide for that, herbicides.

19 Q. In addition to being an endowed professor, a

10:41:48

20 weed scientist, do you hold any other titles at UC Davis?

21 A. Yes, I do. I'm the director for the weed
22 information center. And, also, I'm the co-director for
23 the Western Integrated Pest Management center as well.

24 Q. All right. And have you or do you still play

10:42:04

25 any role in the statewide Integrated Pest Management

1 program?

2 A. I am the outgoing director for the statewide IPM
3 program at the University of California. And yes, I do
4 engage with them. I do work with them still. Although,
10:42:22 5 I'm not a director anymore.

6 Q. And can you explain to the jury what the
7 statewide Integrated Pest Management program is?

8 A. Yes. The statewide IPM program work with pest
9 management. Pest -- you know, could be insect, disease,
10:42:36 10 weeds. All these are pests. We have three campuses,
11 which they all work on pest management: Riverside,
12 Berkeley and Davis.

13 So the statewide IPM program work with the three
14 campuses, bring them together, so there is no overlap,
10:42:54 15 everybody knows what the other are doing. When an issue
16 come up, who is going to attack of the issue. So that's
17 what the statewide IPM program.

18 The program also involve the development of
19 education materials, including developing material for
10:43:12 20 pesticide application, licensing, preparing the tests for
21 that exam and so forth.

22 So we work also with DPR, which is Department of
23 Pest Regulation, to develop these materials on health and
24 that avenue.

10:43:27 25 Q. And that includes certification materials for

1 people who are studying for, for example, a qualified
2 applicator's certificate?

3 A. Yes, exactly. We develop the education
4 materials, the books, that they need for the people to
10:43:42 5 get the training and pass the test. We write the test
6 for them as well and give it to the ERP. And the ERP
7 gives the questions they want to use for the test.

8 Q. And what did your role as the outgoing or the
9 former director entail?

10:43:59 10 A. I'm sorry, I didn't get it.

11 Q. What was your role as the director of the IPM
12 program?

13 A. Well, I was -- oversee the entire program. I
14 review anything coming from the program. You know, I'm
10:44:10 15 the one who establish actually the pesticide
16 certification program. We didn't have that when I came.
17 We established the program.

18 So I was the director, oversee the entire
19 program across the state.

10:44:22 20 Q. And how long did you hold the title of director?

21 A. I was the director for six years. Actually,
22 they hired me for five-years term, but then it went for
23 six years.

24 Q. And how long have you been at UC Davis, Doctor?

10:44:39 25 A. This is ten years since I came to UC Davis.

1 Q. And is that on a full-time basis?

2 A. Yes. I am a full-time professor.

3 Q. Do you have teaching responsibilities at UC
4 Davis?

10:44:50 5 A. Yes, I do teach. And I do -- I supervise the
6 graduate students as well.

7 Q. So both undergraduate and graduate students?

8 A. Yes, yes.

9 Q. All right. And what subjects do you teach,
10 Doctor?

11 A. Well, I teach several classes. I teach
12 herbicide physiology and action. I teach a weed science
13 class. I teach Integrated Pest Management class. And
14 also, I teach the seminar class.

10:45:15 15 Q. And does the subject of glyphosate come up in
16 the courses you teach?

17 A. Yes, it does. It comes in all my classes.

18 Q. All right. And does any of your teaching
19 involve the safe use and application of pesticides?

10:45:30 20 A. Yes.

21 Q. And who -- who do you provide that sort of
22 teaching to?

23 A. Well, I provide it formally for the students in
24 the class. And, also, I provide some teaching and
10:45:39 25 education materials for applicator, the people who use

1 this out in the fields. So I do that as well.

2 Q. All right. And along with teaching, does part
3 of your job involve any field work?

10:45:55

4 A. Yeah, I do a lot of field work. I do a lot of
5 field research and -- yes.

6 Q. Can you describe just generally what that kind
7 of field research involves?

10:46:08

8 A. Yeah. I do field research about how you manage
9 weeds and how you control weeds, about using herbicides
10 and controlling weeds and different crops and roadsides
11 and nonagricultural areas. So I deal with all aspect
12 of -- of weed control and herbicide application and
13 different setting.

10:46:25

14 Q. And does part of your field work involve you
15 actually applying pesticides and herbicides?

16 A. Yes, I did -- I do.

17 Q. All right. And I say "herbicides." You say
18 "herbicides." Is there a correct pronunciation?

10:46:37

19 A. Well, I said it "herbicide." You have to follow
20 me.

21 Q. And the jury's heard about herbicides --

22 A. Yeah.

23 Q. -- and pesticides. What's the difference?

24 A. Well, pesticide is wider term than herbicide.

10:46:47

25 You know, when we say "pest," pest include multiple

1 things. It include insect, it include diseases -- kind
2 of diseases, it include weeds, it include algae, it
3 include rodents.

10:47:03 4 So herbicides are the chemical that control
5 weeds. If the chemical control insects, we call it
6 insecticides. If the chemical control disease, we call
7 it fungicides. So they are -- pesticide is a broader
8 term. Herbicide is the specific term.

10:47:18 9 Q. Okay. So a herbicide is a subset of a
10 pesticide?

11 A. Correct.

12 Q. In lay person's terms?

13 A. Correct.

10:47:24 14 Q. In the field, do you train your students on the
15 safe use and application of pesticides and herbicides?

16 A. Correct.

17 Q. All right. And can you estimate how many times
18 you have actually applied a pesticide or herbicide in the
19 field?

10:47:33 20 A. Oh, it's too many times. It's thousands of
21 times, maybe. I -- I start working on this field back in
22 the mid-'70s. So it's been more than 40 years I've been
23 doing that.

10:47:49 24 Q. All right. And how long have you been applying
25 glyphosate-based herbicides in the field?

1 A. Well, I start working with the glyphosate back
2 in 1976, '77. So it's more than 40 years.

3 Q. And is part of your job at UC Davis conducting
4 any research?

10:48:05 5 A. Yeah, I do research, cancer research.

6 Q. All right. And what type of research do you do,
7 Doctor.

8 A. Well, I said it's mostly to deal with weed.
9 Weed physiology, herbicide physiology, how herbicide
10:48:17 10 absorb, how herbicide affect the plant and kill the
11 plant, how you apply the herbicide.

12 And I do also a big chunk of my work deal with
13 herbicide drift. So I not just only deal with the
14 physiology of the herbicide. I also dealing with
10:48:35 15 herbicide drift. And I -- I -- I -- big chunk of my
16 work -- actually, when I start my career, all my work was
17 on herbicide drift.

18 Q. All right. And when you're doing research, it's
19 my understanding part of your job is also obtaining grant
10:48:47 20 funds; is that right?

21 A. Correct, correct. But the University system,
22 you -- you have to get outside funding to support your
23 program.

24 Q. All right. And how -- where are the sources of
10:48:57 25 the funding that you have received -- for UC Davis not

1 just for you specifically -- but what are the sources of
2 that?

3 A. Well, there's multiple sources you go after.
4 Mostly I get funded from federal government. I get
10:49:09 5 funded from the state. I get funded from commodity
6 groups. And if you don't know what's commodity groups,
7 means the growers usually have -- they organize
8 themselves and have money that go to research. So I go
9 after those grants as well. And a small portion of my
10:49:28 10 work comes from chemical industry.

11 Q. And when you say "a small portion," what
12 percentage would you attribute it to chemical companies?

13 A. It's less than 1 percent.

14 Q. Of the total grant money UC Davis has received?

10:49:43 15 A. Yeah. All the grant doesn't come to me. It
16 goes to the University. But I use it to conduct
17 research.

18 Q. And have you published much of the research
19 you've done?

10:49:52 20 A. Yeah, I've published quite a bit.

21 Q. And I think you're being humble. Can you tell a
22 little bit about some of the publications? How many
23 refereed journals have you published?

24 A. I have more than 110 refereed journal articles.
10:50:07 25 I publish chapters in book. Maybe seven, eight. I

1 publish extension publication, which mostly education
2 publication. And I have more than 40 of those. I have
3 other publication and proceeding and others. And
4 probably about 1350 or something like that.

10:50:26

5 Q. All right. And do any of your publications
6 relate to the safe use and application of pesticides and
7 herbicides?

10:50:41

8 A. Yes. Many of them deal with safe application of
9 pesticide, herbicide, the drift. Actually, I have a
10 website. You know, it's about safe apply of herbicide
11 and how you reduce the drift. And the website is so
12 popular around the world that I get 10,000 hits a month
13 on the website.

10:50:58

14 Q. All right. And how many of the publications
15 would you estimate you've written about drift?

16 A. Well, I would write quite a few publications on
17 the drift. It's probably a hundred publication.

18 Q. And have you received any awards for your work
19 as a weed scientist?

10:51:12

20 A. Yeah, I have received multiple awards. I am
21 Fulbright scholar. I am -- of course, I got the
22 endowment award. I am Fellow of American Society of
23 Agronomy, Fellow of Weed Science Society of America,
24 Fellow of Western Society of Weed Science, Fellow of
10:51:41 25 North Central Weed Science Society.

1 I've received several awards for outstanding
2 research and outstanding publications and several other
3 awards.

10:51:56 4 Q. And can you describe your educational background
5 to the jury? Let's start with your PhD. Where did you
6 get your PhD?

7 A. Well, I got the Ph.D. at Kansas State
8 University, and that's why I'm wearing a bowtie. I went
9 to school there, got a Ph.D. degree there.

10:52:07 10 Q. And did you get a post doctorate?

11 A. Yeah, I did my post doc at Kansas State as well.
12 And if you don't know what's post doc, that's something
13 you do, you prepare yourself to be a college professor,
14 and that's what I was hoping to be, and now I have become
10:52:24 15 a college professor.

16 Q. And what was your post doctor in?

17 A. It was in physiology of herbicides.

18 Q. And what did you do after obtaining your post
19 doc?

10:52:31 20 A. After obtaining the post doc, I had took a job
21 at Washington State University, and I spent six,
22 seven years over there. Most of my work was dealing with
23 herbicide drift and herbicide action and herbicide
24 application as well.

10:52:48 25 Q. And outside of teaching at UC Davis, do you do

1 any other work? Do you do any work internationally?

2 A. Yeah, I do quite a bit of international
3 agriculture work. I -- I work in -- I did work in
4 Africa, in Middle East and Mediterranean region and Asia.
10:53:08 5 So I did quite a bit of international work. This my
6 field because I am a weed scientist.

7 Q. And throughout your career as a weed scientist,
8 have you done any work with the US EPA?

9 A. Yeah, I did quite a bit of training with them
10:53:21 10 because I told you I work with the drift. So when I was
11 in Washington State, I had a research field and they
12 usually come and do some training there. I update them
13 about the research.

14 When I was in Kansas, also I did -- I did work
10:53:38 15 with them on EPA, trained their people on the ground.
16 Here in California, also I interact with them. So I did
17 quite a bit of work with them.

18 MS. EDWARDS: And your Honor, at this time we'd
19 like to proffer the Dr. Al-Khatib as an expert in the
10:53:56 20 areas of weed science, drift, and on the use and
21 application of glyphosate-based herbicides.

22 THE COURT: Any *voir dire*?

23 MR. WISNER: Yes, your Honor.

24 VOIR DIRE EXAMINATION

10:54:09 25 BY MR. WISNER:

1 Q. Good morning, Doctor. How are you doing?

2 A. Good morning.

3 Q. My name is Brent Wisner. We've never met;
4 right?

10:54:16 5 A. No, we've never met.

6 Q. A couple quick questions about your
7 qualifications. I just want to clarify.

8 A. Sure.

9 Q. You said you have a hundred publications about
10:54:24 10 drift; is that right?

11 A. Correct, about a hundred. I didn't count it.

12 Q. And you previously said you had a 110
13 publications.

14 A. Well, there's a difference what you said and
10:54:35 15 what I said. Hundred came out of referee journal. Two
16 of those publication is about 500.

17 Q. Got you.

18 A. So it's a mixture of both.

19 Q. You said referee journal. What's that?

10:54:44 20 A. Yeah. A referee journal means after you write a
21 scientific paper, it goes to the journal. The journal
22 review it by your peer, and then they give you suggestion
23 what to do, how to revise it, and that's a referee
24 journal. But I do have other publications as well.

10:54:59 25 Q. And is that the same thing as a peer-reviewed

1 journal?

2 A. What do you mean by that? I'm sorry.

3 Q. You've never heard of the phrase "peer-reviewed
4 journal"?

10:55:10 5 A. I said I have a 110 peer-reviewed.

6 Q. Oh, I thought you said referee journal.

7 A. Well, that's peer reviewed.

8 Q. Oh, they're the same thing. Okay. That's what
9 I was trying to clear up. Thank you, Doctor.

10:55:20 10 Quick question: Have you ever studied whether
11 or not an herbicide can cause cancer?

12 A. No, I have not.

13 Q. Have you ever examined the effects of drift on
14 cancer?

10:55:30 15 A. No, I have not.

16 Q. Are you an oncologist?

17 A. No, I'm not.

18 Q. Have you studied cancer in the blood at all?

19 A. No, I have not.

10:55:38 20 Q. You understand this case is about cancer; right?

21 A. It's a case about cancer, yeah.

22 Q. And so when you talk about the safe application
23 of a product, you're not really talking about it in the
24 context of whether or not the product can cause cancer;
10:55:55 25 right?

1 A. No, I'm not.

2 MR. WISNER: Your Honor, we have no objection to
3 this witness being certified as an expert in those three
4 categories with the caveat that he cannot opine about the
10:56:04 5 safety of herbicides generally.

6 MS. EDWARDS: We don't intend to, your Honor.

7 THE COURT: All right. Very well then. I will
8 accept then Dr. Al-Khatib as an expert in the designated
9 areas.

10:56:16 10 You may proceed.

11 MS. EDWARDS: Thank you, your Honor.

12 Q. So Doctor, we're going to go over this in more
13 detail, but can you start by telling the jury generally
14 what you're going to be talking about, what opinions
10:56:29 15 you've formed?

16 A. What we're going to talk today is about weeds,
17 and I did define "weed" for you, and also I'm going to
18 talk about pesticide application, herbicide application,
19 herbicide drift, and the use of herbicides and
10:56:50 20 particularly related to Mr. Johnson case.

21 Q. And you've had an opportunity to review
22 Mr. Johnson's testimony; correct?

23 A. Yes, I did.

24 Q. And what's your understanding as to the
10:56:58 25 herbicides Mr. Johnson was using?

1 A. Mr. Johnson used a glyphosate-based -- two
2 glyphosate-based products, which is Ranger Pro and
3 Roundup.

10:57:14

4 Q. And as a weed scientist, you have an
5 understanding about how glyphosate works to control
6 weeds; correct?

7 A. Correct.

8 Q. And did you bring some slides with you --

9 A. Yes.

10:57:20

10 Q. -- to help explain this to the jury?

11 A. Yes. I brought a few slides.

12 MS. EDWARDS: Your Honor, permission to show
13 slide 1. Counsel has seen it.

10:57:31

14 MR. WISNER: Yeah, we've looked at all the
15 slides. Go ahead and publish them. No problem.

16 THE COURT: All right. Thank you.

17 You may proceed.

18 Q. BY MS. EDWARDS: All right. And Doctor, without
19 getting to in the details, in the weeds --

10:57:40

20 A. Yes.

21 Q. -- can you explain to the jury what it is that
22 we're looking at here?

23 A. Well, first this is how glyphosate works.

10:57:51

24 Glyphosate is non-selective herbicide, which mean it
25 control and kill mostly vegetation. It kill large number

1 of weeds. And it's a unique herbicide because it effect
2 the side that only glyphosate affected.

3 So they affect a pathway in the plant which is
4 what we call the shikimate pathway. And you can see it
10:58:14 5 the front view. I brought pointer, but I hate to use it
6 because I'm --

7 Q. That's okay. I can point. Are you looking
8 right here?

9 A. This is the shikimate pathway. And the purpose
10:58:28 10 of the shikimate pathway is to synthesize three essential
11 amino acids, which you see them in the green:

12 Phenylalanine, tyrosine, and tryptophan. Those are
13 essential amino acids that they can be part of many
14 enzyme in the plant and also part of membrane and other
10:58:51 15 structures of the plant.

16 So the glyphosate affect this pathway.

17 Q. All right. And so we're talking about amino
18 acids down here?

19 A. Yes, I think --

10:59:00 20 Q. Let's not blind anybody.

21 A. This absorb the light, by the way. And I have
22 this problem in my class.

23 Q. I can point for the jury.

24 And did you prepare a slide showing how
10:59:12 25 glyphosate interacts with the shikimate pathway?

1 A. Yes, I do.

2 MS. EDWARDS: Permission to publish, your Honor.

3 THE COURT: Yes. You may proceed.

4 THE WITNESS: So glyphosate affect an enzyme in
10:59:21 5 this pathway. We call it EPSPS. That is a key enzyme in
6 this process. And the way it work, the glyphosate have a
7 conflagration. And when I say "conflagration," this is
8 the conflagration of how the molecule may look like. And
9 the enzyme EPSPS has also conflagration, and this is how
10:59:41 10 it look like.

11 So when the glyphosate come and bind to the
12 enzyme, they bind it this way. And when they bind them
13 this way, then the enzyme would come and ineffective. It
14 stop working. And when it stop working, then you don't
10:59:59 15 have the synthesis of these amino acids in the plant, and
16 what's that mean, the plant won't have this amino acid,
17 it affect the enzyme structure in the plant, it affect
18 the other structure in the plant, and that's why the
19 plant die.

11:00:14 20 Q. BY MS. EDWARDS: All right. And Doctor, you
21 said the shikimate pathway exists in plants. Does it
22 exist in human cells or in plant cells?

23 A. It exists in plant cell; it does not exist in
24 human or animal cells.

11:00:27 25 Q. And did you prepare a brief slide showing that

1 as well?

2 A. Yes, I do have. I'm getting ahead of myself.

3 MS. EDWARDS: Permission to publish, your Honor.

4 THE WITNESS: Yeah, it affect the plant cells

11:00:38 5 and it's -- this shikimate pathway does not exist in
6 animal cells.

7 Q. BY MS. EDWARDS: And does glyphosate kill weeds
8 the same way other herbicides kill weeds?

11:00:52 9 A. Well, glyphosate is unique. As I said, it
10 affect pathway, which is glyphosate is the only herbicide
11 that affect that pathway. Glyphosate is nonselective
12 herbicide, which means it kill broad spectrum weeds.
13 Unlike other herbicides which are selective, they affect
14 a few weeds without affecting others.

11:01:09 15 Q. All right. Thank you. Let's change gears. We
16 can take that slide down.

17 Doctor, the jury's heard a lot about drift.
18 That is an area that you are an expert in; correct?

19 A. Correct.

11:01:19 20 Q. All right. Can you briefly describe for the
21 jury as an expert what drift is? And in regulation to
22 herbicides and pesticides.

23 A. Sure. A drift is off-target movement of a
24 herbicide. So when you put the herbicide, you target an
11:01:35 25 area. You know, when the herbicide portion of that move

1 off target, then that's what we call the drift.

2 Q. All right. And as a pesticide applicator, why
3 is it important to control drift?

4 A. Well, it's important to control the drift for
11:01:49 5 several reason, you know. You don't want that drift to
6 go to another crop or another -- you know, nearby crop
7 and damage them. You don't want the drift to hit people
8 in the area. You don't want the drift to be on yourself
9 as well as applicator. So it's important from the
11:02:07 10 different angles.

11 Q. And the jury's heard the term "nonvolatile"
12 about glyphosate. What does that mean?

13 A. Well, there's two type of drift happen. One
14 volatility drift and one we call it physical drift.
11:02:24 15 Volatility drift when herbicide move from solid or liquid
16 phase to vapor phase.

17 How that happen? That happen when the molecule
18 has a special structure and it has a high vapor pressure.
19 The glyphosate has very low vapor pressure. Actually, it
11:02:43 20 does not volatilize.

21 So volatility drift is not an issue with the
22 glyphosate. It's issue with older products.

23 Q. There are other herbicides that do have
24 volatility?

11:02:53 25 A. Yes.

1 Q. And is volatility important in the ability to
2 control drift?

3 A. Well, of course, it's important. So you need a
4 product that's not volatile, and glyphosate molecule has
11:03:03 5 very low vapor pressure.

6 Q. And you mentioned there is a physical drift.
7 What did you mean by that?

8 A. Physical drift, when smaller droplet of this
9 type, usually below hundred micron, move off target. And
11:03:18 10 these, they get to be moved by force of wind or other
11 factors.

12 Q. All right. And so what are the factors that
13 come into play for an applicator in terms of controlling
14 physical drift?

11:03:30 15 A. Well, physical drift, there's three things you
16 can do. First thing is the droplet size. I mentioned
17 that the droplet is a certain size is the one kind of
18 drift. So you need to use a large volume of water, not
19 the small. You know, sometimes people use a three
11:03:46 20 gallons per acre. You know, you need a larger volume.
21 So you need to use a tip or nozzle or orifice. You know,
22 people, you know, use different wording. So you need to
23 use a tip that produced larger droplet.

24 So the first thing is control the droplet side.

11:04:09 25 Q. All right. So the larger the droplet size, the

1 less drift?

2 A. Correct. And as I said, that's controlled by
3 the volume of water and also by the size of the tip
4 you're going to use.

11:04:19

5 Q. Okay. What's another aspect of controlling
6 physical drift?

7 A. The other fact is the weather conditions. If
8 you have a windy day, you expect certain amount with wind
9 move off target, and that's why mostly label said you
10 cannot spray when the wind below 2 miles an hour and
11 above 10 miles per hour. So there are limitation about
12 the wind speeds to minimize the drift.

11:04:36

13 The other environmental conditions that can
14 impact the drift is temperature. If you have a
15 temperature above 95 degree or a hundred degree, then the
16 droplet will lose water quickly and then you'll end up
17 with -- with more drift.

11:04:52

18 So two components from other standpoint
19 temperature and wind can impact.

11:05:09

20 Q. And how about the height of the application; is
21 that relevant to drift?

22 A. Yeah, that's another factor which is important
23 when it comes to drift, where you release the spray
24 solution. So the more you're close to the target, the
25 less drift you can get. If you put it by wand and you

11:05:23

1 target it toward the weed, you're doing this spot
2 treatment, this is -- you know, the drift could be
3 insignificant, but unlike when you spray by airplane, you
4 can have more drift.

11:05:42

5 So how high you are from the target can impact
6 also the drift as well.

7 Q. And when a pesticide applicator is spraying
8 around, for example, the perimeter of a school or close
9 to a football field, the goal is to really target a
10 specific weed; correct?

11:06:00

11 MR. WISNER: Objection. Speculation.

12 THE COURT: Overruled.

13 You may answer.

14 THE WITNESS: Yes. You use -- we call it the
15 spot treatment. You know, when you are in a situation
16 like this, you don't need to spray everything. You have
17 the sprayer, you have the wand, and you go after the
18 weed, you target it directly toward the weed, and you
19 spray that.

11:06:08

20 Q. BY MS. EDWARDS: All right. And as the former
21 director of the Integrated Pest Management program, you
22 did review and contribute to the materials that somebody
23 studying for a QAC, Qualified Applicator's Certificate,
24 would study; correct?

11:06:22

11:06:36

25 A. That's correct.

1 Q. Do those materials contain the information you
2 just described generally about how to control drift?

3 A. Correct. It has a big section on managing the
4 drift and how you put the -- how you apply the pesticides
5 safely.

11:06:48

6 Q. And you mentioned the label also has material
7 about controlling drift; correct?

8 A. Correct. The label also has materials to
9 suppress that and to reduce the drift as well.

11:06:59

10 Q. And have you prepared any slides reflecting
11 that?

12 A. Sure, I did.

13 MS. EDWARDS: All right. Permission to publish
14 the next slide, your Honor.

11:07:06

15 THE COURT: Any objection?

16 MR. WISNER: No objection, your Honor.

17 THE COURT: Very well. You may proceed.

18 Q. BY MS. EDWARDS: Doctor, can you just briefly
19 explain to the jury, this is from the Ranger Pro label;
20 correct?

11:07:16

21 A. This is from the Ranger Pro label where it has a
22 section to alert worker how to deal with the drift.

23 Q. All right. And it actually says: "Do not apply
24 this product in a way that will contact workers or other
25 persons either directly or through drift."

11:07:30

1 Correct?

2 A. Correct. That's correct.

3 Q. All right. And that's consistent with what you
4 read about Mr. Johnson's testimony; right?

11:07:39 5 A. Yes, I think he -- he did -- he did follow the
6 label.

7 Q. And he knew and did not apply when other people
8 were around; right?

9 A. Yes, yes, he did that.

11:07:47 10 Q. And do qualified applicators receive training
11 about avoiding spraying when other people are around?

12 A. Yes, that's part of the training they get to get
13 the certification.

14 Q. And is there a time of the day when they are
11:08:00 15 taught is best to spray?

16 A. Yeah. Typically the best time to spray is early
17 in the morning. And as I said, you know, the wind can
18 play a major role in the drift, and most of the time,
19 early in the morning you have a calm -- calm morning. So
11:08:15 20 that further reduce the drift.

21 And I thought Mr. Johnson was correct by
22 applying early in the morning.

23 Q. Early in the morning. Okay.

24 And does the Ranger Pro label have other
11:08:29 25 information about how to control drift?

1 A. Yeah, I think I have other slide prepared.

2 MS. EDWARDS: Okay. Permission to publish, your
3 Honor.

4 THE COURT: Yes, you may proceed.

11:08:39 5 THE WITNESS: You know --

6 Q. BY MS. EDWARDS: Let me ask you a question.

7 A. I'm sorry.

8 Q. All right. This is again from the Ranger Pro
9 label under a heading that says "Spray Drift Management"?

11:08:49 10 Correct?

11 A. Yes, correct.

12 Q. And it says, "Avoiding spray drift at the
13 application site is the responsibility of the
14 applicator"; correct?

11:08:56 15 A. Correct.

16 Q. And it goes on to say, "The interaction of many
17 equipment and weather-related factors determines the
18 potential for spray drift"; right?

19 A. Yes.

11:09:08 20 Q. And that's generally what we've been talking
21 about; right?

22 A. That's what I discussed with you.

23 Q. Okay. And that again is consistent with what
24 Mr. Johnson said, that he knew it was his responsibility?

11:09:16 25 A. Yeah, I think so.

1 Q. And he was trained on that?

2 A. Yes, I think so.

3 Q. And is there other language on the Ranger Pro
4 label that talks about drift?

11:09:24

5 A. Yeah, there's a warning about the wind, about
6 the -- you know, the wind speed and other environmental
7 conditions. And I think I have a slide also prepared for
8 that purpose.

9 MS. EDWARDS: Permission to publish, your Honor.

11:09:35

10 THE COURT: Yes.

11 MS. EDWARDS: Thank you.

12 Q. This says: "Importance of droplet size. The
13 most effective way to reduce drift potential is to apply
14 large droplets."

11:09:45

15 A. Yes. As I described to you that the droplet
16 size is important to reduce drift. So you need to use a
17 larger droplet size.

18 Q. And it talks about wind as well. And you've
19 talked about this. Drift potential is lowest between

11:10:00

20 wind speeds of 2 to 10 miles per hour; correct?

21 A. Correct, that's what I discussed earlier, too.
22 That's the range of wind speed you're supposed to spray.
23 If it's above that, you don't spray. If it's below that,
24 you don't spray.

11:10:15

25 Q. And this is again consistent with Mr. Johnson's

1 testimony?

2 A. Correct. I think he followed the label.

3 Q. All right. So in your expert opinion, what
4 Mr. Johnson was doing was following the label?

11:10:26 5 A. Yeah, I think so. He did a good job, I think.

6 Q. And taking steps to reduce his exposure to
7 drift?

8 A. Yes.

9 Q. Turning back to our case and Mr. Johnson
11:10:34 10 specifically, can you tell the jury what methods of
11 application Mr. Johnson used to spray Ranger Pro?

12 A. Yes. The method he used, it's basically -- it's
13 a ground application. It's a spot treatment, we call it,
14 and he used two type of sprayers, one which is the
11:10:50 15 backpack sprayer, and one a sprayer sit in the back of
16 the truck. But both they function about the same way.

17 Q. All right. And do you have the pictures of the
18 application methods Mr. Johnson used?

19 A. Yes. I prepared a slide, I think.

11:11:07 20 MS. EDWARDS: Permission to publish.

21 THE COURT: Yes.

22 Q. BY MS. EDWARDS: All right. So the jury has
23 already seen a picture of the backpack sprayer but not
24 much testimony about it. Understanding Mr. Johnson used
11:11:17 25 the backpack sprayer I think only two or three times, can

1 you explain for the jury how this works?

2 A. Okay. Well, the backpack sprayer is a sprayer.
3 You carry it. It has a tank, which the tank usually 2 to
4 3 gallons. That's the capacity of the tank. And you
11:11:37 5 generate a pressure, because you need a pressure to spray
6 the chemical, and the pressure is not a huge pressure,
7 but you need a pressure. And there is a bar where you
8 can push it several times to generate the pressure.

9 Q. That's the bar right here, Doctor (indicating)?

11:11:54 10 A. The one -- yeah, the one a little bit on the
11 side. Can you point it out so they can --

12 Q. Is that here?

13 A. No, the other one.

14 So you can push it, and when it hit the right
11:12:05 15 pressure, it stop. You feel it. It's not going to go
16 there.

17 Q. Now I'm going to ask you, is this called a wand,
18 the long --

19 A. I'll get to that.

11:12:13 20 Then also it has the plumbing. I call it the
21 plumbing. It's the hoses. And then the hoses end up
22 with what you call it a wand or rod or whatever. And
23 what is that, that is about 36 inches long, and at the
24 beginning of it, there is shutoff valve where you can
11:12:34 25 shut off or you can -- you can spray. When you spray,

1 you push it in. When you stop, you release it.

2 Q. And that's the handle right here?

3 A. That's the handle, yeah.

4 Q. Okay. So by pulling or pushing that, it's not
11:12:46 5 spraying continuously. You can turn it off and turn it
6 on?

7 A. No, you can turn it on and off.

8 And then in the end of that, you see the tip or
9 the nozzle or the orifice. Can you point to that?

11:12:57 10 Q. That's right down in here?

11 A. That's the tip. That's with a hole, small hole,
12 to get the spray through that. So that is basically what
13 the sprayer, the backpack sprayer is.

14 Now, the second one, the bigger sprayer on the
11:13:13 15 left side, is a sprayer has the same principle like the
16 backpack but on a larger scale. So you have a tank which
17 is, in the case of Mr. Johnson was 50 gallons tank, and
18 that's enough to spray about three acres if you want to,
19 you know, use the whole solution. We usually spray 10 to
11:13:36 20 15 gallons per acre so we know it's going to cover maybe
21 three -- three acres.

22 Q. Let me interrupt, Doctor. This is a type of
23 spray application you're familiar with?

24 A. Yes, I am familiar with that. I use a different
11:13:50 25 type of sprayer, but I'm familiar with the backpack, with

1 this one, also with large one.

2 But I want to just show how the sprayer is. So
3 that's the tank, and then you have a pump to generate a
4 pressure. This is not a huge pump. It generate enough
11:14:07 5 pressure to spray, and then you have the plumbing, and
6 you have a long hose which is about, I don't know how
7 many feet, but the hose end up with wand like the one you
8 see in the backpack sprayer.

9 Q. Let me interrupt again, Doctor. I need to ask
11:14:22 10 questions a little bit.

11 A. Yes.

12 Q. All right. So you have a wand similar to like
13 this with this 50-gallon spray applicator; correct?

14 A. Correct.

11:14:29 15 Q. And it has a motor right here; correct?

16 A. Yes. That's a motor link combined with a pump.
17 Pump generate the ability to run the water.

18 MS. EDWARDS: And your Honor, may I ask -- I
19 hate to do this, but could the jury have a short break.

11:14:48 20 Just to accommodate --

21 (Interruption in proceedings.)

22 THE COURT: Ladies and Gentlemen, let's take a
23 short break. Let's take a ten-minute recess, and we'll
24 resume at 11:25. Please do not discuss the case.

11:15:32 25 (Recess.)

1 THE COURT: Welcome back, Ladies and Gentlemen.

2 A JUROR: We have one down getting tea.

3 THE COURT: Thank you. We'll wait for Juror
4 Number 15.

11:28:33 5 Thank you. All right. So we'll resume now, and
6 Dr. Al-Khatib remains under oath. Thank you.

7 You may proceed, Ms. Edwards.

8 MS. EDWARDS: Thank you.

9 Q. All right. Doctor, when we left off, we were
11:30:03 10 talking about the 50-gallon truck-mounted sprayer, and I
11 was asking you about the motor in the photograph. And
12 Mr. Johnson testified that it had a lawnmower type of
13 motor.

14 Would that be consistent with your experience?

11:30:16 15 A. Yeah, that's consistent with normal sprayer.

16 Q. All right. And in your experience, what type of
17 power does a motor like that generate?

18 A. It doesn't generate a lot of power, and it
19 consists with the -- what's required for herbicide
11:30:34 20 application, which is about 15, 20, 30 psi. That's the
21 range we -- psi is pounds per square inch. That's the
22 pressure we use, and this is consistent with normal
23 spray.

24 Q. And in your experience, as you pull the hose
11:30:51 25 further away from the truck-mounted sprayer, does that

1 affect the pressure as well?

2 A. Usually as the -- if the hose is long, the
3 pressure will drop on you. It will get less pressure.

11:31:08

4 And also this type of sprayer has a backup, you know,
5 pathway. When you have too much water, then you can go
6 back to the tank.

7 Q. Okay. And in your experience -- I think I
8 started to ask about this -- the wand that is used on a
9 truck-mounted sprayer is similar to, if not identical, to
10 what we see here in the photograph?

11:31:21

11 A. Correct, it's similar to what you use -- the
12 wand in the backpack sprayer is similar to the wand on
13 the tractor-mounted sprayer.

14 Q. So it's about three, three and a half feet long?

11:31:34

15 A. It's about 36 inches long, yeah, about three,
16 three and a half feet.

17 Q. And it has the nozzle or the tip at the end?

18 A. It has the same nozzle and it has shutoff valve,
19 too, which is the one you squeeze it to spray.

11:31:49

20 Q. Okay. So again, it's not spraying continuously.
21 You turn it off and turn it on when you come up to a
22 weed?

23 A. That's correct. That's what we call a spot
24 treatment, when you have a weed, you spray it. When you
25 don't have weed, you turn the machine off.

11:32:01

1 Q. And Mr. Johnson described having blue or pink or
2 red or different colored nozzles. Those nozzles had
3 sizes, of course, and it gave you less spray at the time.

4 Are the interchangeable nozzles Mr. Johnson
11:32:17 5 described consistent with the nozzles that are typically
6 used when spraying herbicides?

7 A. Yeah, I think the tip has a nozzle or -- I call
8 it tip. People call it nozzle, some people call it
9 orifice. And these thing, you can change them. You
11:32:32 10 can -- you know, it's easy to change them, and you can
11 change them based on the amount of spray you're going
12 to -- when I say amount, they deliver amount of spray.

13 So they can be tiny, they can be little bit
14 larger, but we usually range in herbicide supply
11:32:51 15 somewhere between 10 to 15 gallons per acre.

16 Q. And so as Mr. Johnson said, by changing out the
17 nozzle, you control the size of the droplet?

18 A. Correct, correct.

19 Q. And the jury heard on Thursday from an expert
11:33:03 20 that the spraying with a power washer and spraying with
21 this truck-mounted applicator were similar.

22 Doctor, have you ever used a power washer at
23 home?

24 A. Yeah, I do have one, one power washer in my
11:33:18 25 home. I use it myself.

1 Q. And what do you use that for?

2 A. I use it to -- I have moss and bricks back in
3 the ground. I have an area with moss so I use power to
4 wash them. I have poops in my roof so I go up and clean
11:33:37 5 them, you know, bird pee and poops, they can damage, so I
6 do use that.

7 But power washer is different than a sprayer.

8 Q. All right. So as an expert in the application
9 of herbicides, is there any comparison between what we
11:33:51 10 see here in the photograph with the truck-mounted sprayer
11 and the power washer you use to blast mold off your
12 bricks?

13 A. They are different machines made for different
14 purpose. You know, if you use a power washer like in the
11:34:04 15 back ground on the plants, you're going to dig hole in
16 the soil because they come so hard.

17 You know, there's a time when I put my hand in
18 front of the power washer, and it almost broke my hand.
19 So it's a lot of pressure. They're made for different
11:34:20 20 purpose. They are not the same.

21 Q. All right. And the same toxicologist told the
22 jury -- and I want to make sure I get this right -- "if
23 you've ever used one, just one trigger would literally
24 fill this courtroom with mist."

11:34:33 25 And Doctor, as an expert in this area, do you

1 agree with that statement?

2 A. You talk about sprayer; right?

3 Q. Yes, Doctor.

4 A. Well, I think this is wrong and -- and
11:34:46 5 scientific, and for me as a scientist, it's absurd. I
6 think when you spray and use a sprayer, you use small
7 amount of volume at low pressure and -- and you -- you
8 know, larger droplet. So they are different.

9 So when person talk about this, either they've
11:35:07 10 never sprayed in their life or they don't know what
11 they're talking about, you know. They are different, you
12 know, used for different purpose.

13 Q. All right. And in your expert opinion, Doctor,
14 if an applicator like Mr. Johnson follows the label, like
11:35:23 15 he did, what is the likelihood of experiencing drift?

16 A. Well, he is using -- you know, following the
17 label, he using a wand, he direct it to the plant. So
18 the drift, I think, is insignificant in this case.

19 Q. And Mr. Johnson did do a good job following the
11:35:39 20 label and his training; correct?

21 A. Yeah, he did follow the label. He use exactly
22 what the label ask him to do.

23 Q. Let's switch gears a little bit. You are
24 familiar with the concept of personal protective
11:35:51 25 equipment; right?

1 A. Yes.

2 Q. And do you teach your students about the use of
3 personal protection equipment?

4 A. Yes, I do.

11:35:57 5 Q. And what do you teach them?

6 A. Well, what I teach them, that they got to follow
7 the label. Whatever the label ask them to do, they need
8 to follow the label from protective standpoint and -- and
9 they need to be careful when they spray and follow what
10 the label tells them to do.

11:36:11

11 Q. And do you have an understanding about what
12 personal protection equipment Mr. Johnson wore when he
13 was spraying?

14 A. Yeah, I think he was doing very good. I mean,
15 he -- he put a Tyvek suit. He has a rubber boot. He put
16 gloves, rubber gloves, and he has a cap on his head. He
17 use goggles to protect his eye. He use mask on his nose
18 and mouth. So I thought he was doing very good from that
19 angle.

11:36:44 20 Q. And how long have you been spraying herbicides?

21 A. It's been long time, you know, since 1977 --
22 mid-'70s. Let's put it this way.

23 Q. And how many different pesticides or herbicides
24 have you sprayed since the mid-1970s?

11:36:59 25 A. Well, I work with many, many pesticide and

1 herbicide. Probably I work with at least 70 different
2 active ingredients. Those are active ingredients, not
3 the product. So the product would be larger than that.

4 Q. And how long have you been spraying Ranger Pro
11:37:17 5 or Roundup or glyphosate-based herbicides?

6 A. I was doing that since 1976.

7 Q. And if I asked you how many times would you
8 estimate you've sprayed a pesticide in your 40-plus year
9 career?

11:37:30 10 A. Too many times. Probably more than a thousand
11 times.

12 Q. And do you personally wear personal protection
13 equipment when you're spraying pesticides?

14 A. Yeah, when I am in the field, we usually supply
11:37:42 15 multiple pesticide, and especially on research, it's not
16 like you spray one. You spray multiple. So I put on
17 protective gear as well.

18 Q. And is one of the items of protective gear you
19 wear a Tyvek suit?

11:37:57 20 A. Yeah, I wear a Tyvek suit, a Tyvek 400.

21 Q. And how about your students; do you have your
22 students wear Tyvek suits when they're spraying
23 pesticides?

24 A. Yes, I ask them to do that.

11:38:06 25 MR. WISNER: Your Honor, sidebar.

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THE COURT: Yes.

(Sidebar.)

11:38:28

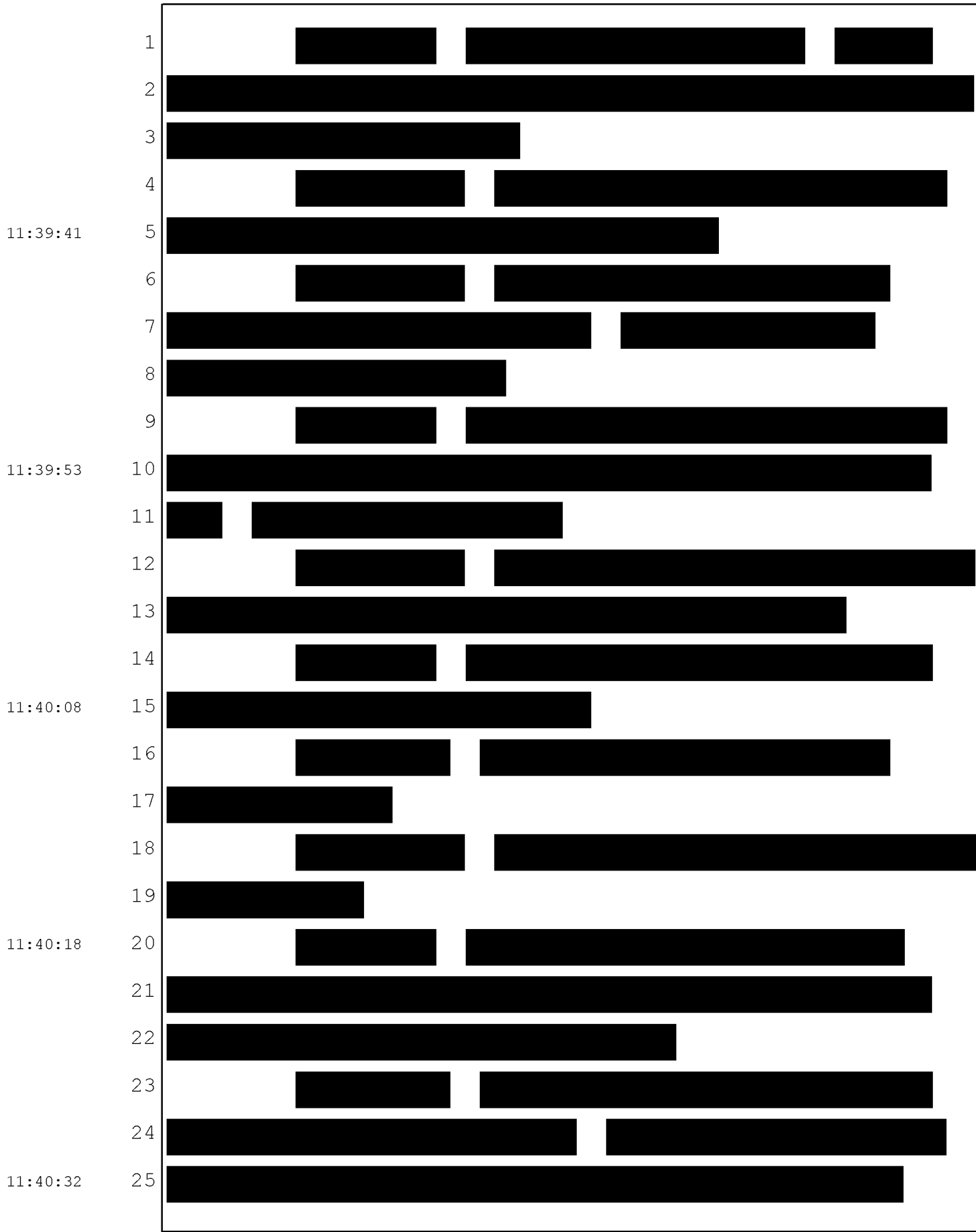
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[REDACTED]



1 [REDACTED] [REDACTED]
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8 [REDACTED] [REDACTED]
9 [REDACTED]

11:40:45

11:40:59

10 [REDACTED] [REDACTED]
11 (End sidebar.)
12 THE COURT: All right. You may proceed,
13 Ms. Edwards.

14 MS. EDWARDS: Thank you.

11:41:12

15 Q. And Doctor, where we left off, I was asking you
16 about what you teach your students about their use of
17 personal protection equipment. Do you teach your
18 students to wear Tyvek suits?

11:41:26

19 A. Yes, if they're out in the field and they spray,
20 I ask them to put that, yes.

21 Q. And is there a particular brand of Tyvek suit
22 that you have your students wear?

23 A. We use the Tyvek 400. That's a standard for our
24 field where we have a herbicide.

11:41:35

25 MR. WISNER: Your Honor, can we have a sidebar?

1 I'd like to show you...

2 THE COURT: Yes.

3 (Sidebar.)

4 [REDACTED]

11:41:53

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

11:42:12

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

11:42:22

15 [REDACTED]

16 (End sidebar.)

17 THE COURT: All right. You may continue.

18 MS. EDWARDS: Thank you, your Honor.

19 Q. And can you estimate how many of students you

11:42:38

20 have taught over the years about the use of personal

21 protection equipment, including Tyvek suits?

22 A. Too many. I haven't calculated that, you know,

23 how many students. But I do teach in the courtroom, I do

24 teach the applicator, I do teach the other setting. So I

11:42:56

25 got -- you know, throughout my life, I supervised almost

1 60 Ph.D. and Master's students besides undergraduate
2 students. So I can't really give you a number, but it's
3 a large number.

11:43:12

4 Q. And do you use glyphosate only in a research
5 setting, Doctor?

6 A. No, I use it myself. You know, I use it in my
7 backyard.

8 MS. EDWARDS: Thank you very much. I have no
9 further questions, Doctor.

11:43:20

10 THE COURT: Thank you.

11 Mr. Wisner.

12 MR. WISNER: Thank you, your Honor.

13 Permission to publish your slide. Is that okay?
14

15 CROSS-EXAMINATION

16 BY MR. WISNER:

17 Q. Hi, Doctor. How are you doing?

18 A. Hi.

11:43:41

19 Q. You recall this thing that you were just showing
20 the jury a second ago?

21 A. Sure.

22 Q. Do you recall that?

23 A. Yeah.

11:43:48

24 Q. You said you frequently use the truck sprayer;
25 is that right?

1 A. I use a sprayer similar to this, but it's
2 mounted on the tractor, not on a truck.

3 Q. Okay. Just to be clear, have you actually
4 looked at the one that Mr. Johnson used?

11:43:57 5 A. No, I have not.

6 Q. So the scope of your evaluation of the sprayer
7 is this picture; right?

8 A. Yes, and my experience with sprayers.

9 Q. I understand. But you actually haven't
11:44:06 10 physically went and looked at this, have you?

11 A. No, sir, I did not.

12 Q. Okay. Going full throttle on one of these
13 sprayers, how much can you get out in an hour?

14 A. You get with the tips we use in herbicides
11:44:18 15 somewhere between 10 to 12 -- 12, 13 gallons per hour.

16 Q. Okay. Now Mr. Johnson told this jury that when
17 he did it, he'd go through 50 gallons in an hour.

18 A. I wasn't there. I don't know what settings he
19 did, and I have not inspect the spray, but in general,
11:44:39 20 when we put herbicide, that's the range we -- we go with.

21 Q. So to be clear, your opinion about drift in this
22 case assumes about 12 gallons an hour with this sprayer?

23 A. Yeah. And as you go higher with the volume, the
24 drift get less because the droplet get larger.

11:44:57 25 Q. What if the pressure's higher?

1 A. Well, as I said, I haven't looked at this so I
2 can't really make a comment about it.

3 Q. That's right. But you did comment about it, and
4 you said it wasn't a power washer. That's what you told
11:45:10 5 this jury, didn't you?

6 A. No. I said it's not a power washer. It cannot
7 be a power washer because that's not what we use in
8 herbicide.

9 Q. But if this motor, this motor that you haven't
11:45:23 10 looked at is actually stronger, then you could get
11 50 gallons out an hour, couldn't you?

12 A. I don't think so.

13 Q. Okay. So you think Mr. Johnson lied to the
14 jury?

11:45:32 15 A. I didn't say that, but I need to look at the
16 sprayer.

17 Q. Have you ever talked to him?

18 A. No, I have not.

19 Q. Have you reviewed his testimony in court?

11:45:39 20 A. I'm sorry?

21 Q. You said you reviewed his testimony. I'm just
22 curious what testimony you looked at.

23 A. Yeah. That's the deposition he gave.

24 Q. He took three depositions. Which one did you
11:45:49 25 read, sir?

1 A. One of the deposition. I don't know which
2 ones --

3 Q. All right. So there's two that you didn't look
4 at?

11:45:53 5 A. Maybe I look at one.

6 Q. Okay. So you didn't look at the two
7 depositions, you didn't read his testimony in trial, and
8 based on your view of this photograph, you're telling
9 this jury that he wasn't exposed to any significant
10 drift?

11 A. I don't think he -- with the way we spray it
12 with the amount of volume he used, the drift can be
13 insignificant.

14 Q. Now you told this jury that this is used for
11:46:19 15 spot treatment; is that right?

16 A. Correct, sir.

17 Q. Now if he was applying at 50 gallons an hour
18 over the course of several school campuses, that's not
19 spot treatment; right?

11:46:31 20 A. No, it's spot treatment because this type of
21 sprayer, you go with the wand out to where the weeds are,
22 and that's why we call it the spot treatment. There are
23 other application, we call the broad spectrum spray,
24 which mean you have bunch of nozzles and they turned on
11:46:50 25 and the person would walk with all of them working and

1 spraying so you don't have a mean to shut it off.

2 Whenever you shut it off, you shut it off when
3 there is no weed. So you spray, there is no weed. You
4 shut off the valve, and that's what people call it spot
5 treatment, because you not spraying every inch in that
6 field.

11:47:08

7 Q. I see.

8 THE COURT: Excuse me, Counsel. Can you please
9 approach.

11:47:16

10 MR. WISNER: Yes, your Honor.

11 (Sidebar.)

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

11:47:34

19 (End sidebar.)

11:47:44

20 THE COURT: All right. You may continue.

21 Q. BY MR. WISNER: I assume, sir, you weren't there
22 when Mr. Johnson was spraying; right?

23 A. No, I was not.

24 Q. So you're kind of guessing about what happened?

11:47:57

25 A. I make my best judgement. I wasn't there.

1 Q. I'm sure you went out to Benicia, the school
2 district, and looked at the terrain; right?

3 A. No, I did not. What -- what -- I don't know
4 what the question was.

11:48:06

5 Q. Well, you're saying he used it for spot
6 treatment. Did you actually go to the school campuses
7 and look at what he did?

8 A. No, I did not.

11:48:16

9 MS. EDWARDS: May I ask Mr. Wisner heed your
10 instructions at sidebar.

11 THE COURT: Thank you. Yes.

12 Q. BY MR. WISNER: Please answer my question, sir.

11:48:29

13 A. I'm sorry? The question is this is a spot
14 treatment. When we say spot treatment, I mean, if you
15 walk in this room and there are weeds here and there, you
16 spray those weeds, and when you're done with them, when
17 you move, you walk, there is no weeds, you turn it off.
18 That's what the spot treatment. That's why we use these
19 type of sprayer.

11:48:45

20 You know, if you want to do broadcast spray,
21 there's another sprayer we can use. That's why I said
22 broad -- spot treatment.

11:48:59

23 Q. BY MR. WISNER: I understand that, sir. And I
24 understand you didn't actually go and look at where he
25 was spraying, did you?

1 A. No, I said I did not.

2 Q. So you don't know if he was doing spot treatment
3 or if he was spraying entire walkways or even fields?
4 You don't know?

11:49:05 5 A. No, I did not go --

6 Q. You read his depo, though; right?

7 A. Yeah. I read his depo.

8 Q. And he said in his depo that he was doing broad
9 spraying, didn't he?

11:49:15 10 A. I think with this type of sprayer, you don't do
11 broad spray. When you're done with the weeds, you shut
12 it off. You know, when you have weeds, you spray. And
13 that's the term "spot treatment," yes.

14 Q. Now, Doctor, you talked a little bit about the
11:49:42 15 label; is that right?

16 A. Sure.

17 Q. You talked about the label; right, Doctor?

18 A. Sure.

19 Q. And you're aware of the IARC's classification of
11:49:53 20 glyphosate as a human probable carcinogen; right?

21 A. I read the news brief about it, you know, what
22 it said.

23 Q. You've actually spoken publicly about it; right?

24 A. No, I did not.

11:50:07 25 MR. WISNER: Permission to approach.

1 THE COURT: Yes.

2 MR. WISNER: The record will reflect I am
3 handing the witness Plaintiff's Exhibit 1055.

4 Q. Sir, I just handed you a document. It's a
11:50:21 5 newspaper article. Do you see that?

6 A. Yeah.

7 Q. Do you see that, sir? Excuse me, Doctor, do you
8 see that's a newspaper article?

9 A. Yeah. I need to see it because I've near been
11:50:33 10 there.

11 Q. Okay. Let's just look at what it says and see
12 if it refreshes your recollection. It discusses you, do
13 you see that? It says, "The event, coined the Roundup on
14 Roundup, was hosted by Blue Circle, the University of
11:50:46 15 California cooperative extension. It began with a
16 presentation from Kassim Al-Khatib, a University of
17 California Davis cooperative extension specialist and
18 plant science professor."

19 That's you; right?

11:50:58 20 A. That's me. What is this Elks Ranch? Is that
21 the Half Moon? Because I want to remember where...

22 Q. Honestly, Doctor, you were the one that was
23 there so you would know better than me.

24 A. Just go ahead because I need to see.

11:51:12 25 Q. The next paragraph down, it says --

1 MS. EDWARDS: Your Honor, objection. Hearsay.

2 MR. WISNER: Impeachment, your Honor.

3 THE COURT: Very well. Overruled.

4 You may proceed.

11:51:25

5 Q. BY MR. WISNER: "At the end of it, Al-Khatib
6 addressed a March report from the World Health
7 Organization that found glyphosate to be 'a probable
8 carcinogen,' putting it in the same level of cancer with
9 things like anabolic steroids when used industrially."

11:51:43

10 Do you say that, Doctor?

11 A. No, I did not. I was there to talk about the
12 glyphosate use. I didn't talk about all this. I have
13 not seen even this.

14 Q. Well, it quotes you.

11:51:52

15 A. Well --

16 Q. It says -- in response to that, it says that you
17 said, "We've got to take it seriously. You've got to be
18 careful when you use it."

19 Do you see that?

11:52:00

20 A. That's about using compounds using herb --
21 pesticides. I was talking about pesticide use, not about
22 this world, you know, organization for cancer.

23 Q. So a second ago, when I asked you, "Did you talk
24 about it publicly," are you going to change that

11:52:14

25 testimony now? You actually have talked about IARC

1 publicly?

2 A. No. I did not touch that. My thought in that
3 presentation is to talk about Roundup use and application
4 of Roundup. So I never even seen this before, what they
11:52:26 5 wrote.

6 Q. The internet's amazing.

7 MR. WISNER: May I approach, your Honor?

8 THE COURT: Yes, you may.

9 MR. WISNER: I'm handing this witness

11:52:37 10 Exhibit 848.

11 Q. Sir, this is a copy of the Ranger Pro label;
12 correct?

13 A. Correct, sir.

14 Q. And can you please just tell me where this label
11:52:47 15 mentions the IARC classification?

16 A. It does not.

17 Q. Well, if it causes cancer, that would be part of
18 the safe application; right?

19 A. What's that?

11:52:57 20 Q. If it causes cancer, that would be something you
21 need to know to safely apply it; right?

22 A. Well, I -- I have the label. I rely on EPA,
23 what EPA telling me. EPA telling me that this is a
24 product -- they did look at a lot of data. They look at
11:53:15 25 data in public -- literary data. This is organization

1 been there for 50 years, and they've been doing this with
2 many different product. And EPA telling me this is a
3 safe product. So that's what the label is here. It does
4 not tell me what you said here.

11:53:32

5 Q. I'm sorry, sir. I didn't mention the EPA at all
6 in my questions.

7 A. Yeah, but --

8 Q. I'm going to ask you the question again. Let's
9 see if you can actually answer that question. Okay?

10 A. Okay. Sorry. Yes, sir.

11 Q. If it causes cancer, that would be something you
12 need to know to safely apply it; right?

13 A. Yeah. That's right.

11:53:51

14 MR. WISNER: So I move to strike his prior
15 answer as non-responsive, your Honor.

16 THE COURT: Overruled.

17 MR. WISNER: Okay.

18 Q. Sir, how much have you been paid in this case?

19 A. I get paid \$350 an hour for my time.

11:54:07

20 Q. How much total have you billed Monsanto for your
21 testimony.

22 A. It probably the total would be 200 hours.

23 Q. So what's the number? Do you know?

24 A. 70,000 would be the -- that'd be the range.

11:54:20

25 Q. 70,000 is the range, sir? Is that your

1 testimony?

2 A. Yeah, that'd be. That's the whole thing for
3 this case.

4 Q. Sure. Sure.

11:54:28

5 MR. WISNER: Permission to approach, your Honor?

6 THE COURT: Yes.

7 MS. EDWARDS: And your Honor, we need a sidebar
8 on this.

9 THE COURT: Very well.

11:54:44

10 (Sidebar.)

11 [REDACTED] [REDACTED]
12 [REDACTED] [REDACTED]
13 [REDACTED] [REDACTED]
14 [REDACTED]

11:55:02

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(End sidebar.)

MR. WISNER: May I approach, your Honor?

1 THE COURT: Yes.

2 Q. BY MR. WISNER: Handing you Plaintiff's
3 Exhibit 1053.

4 Do you see that, sir?

11:56:40

5 A. Yes, Counsel.

6 Q. This is your invoice, Monsanto case, October 12
7 to February 2, 2018. It specifies under the items that
8 this relates to the Johnson case.

9 Do you see that?

11:56:52

10 A. It's not totally for the Johnson case, no.

11 Q. Okay. All right. So of this invoice, 70,000 is
12 for Johnson?

13 A. No, that's not that.

14 Q. I thought you just said a second ago --

11:57:07

15 A. Yes. But after this, the probably total would
16 be 200 hours.

17 Q. So your grand total, then, number is about
18 \$70,000?

19 A. Correct, yeah.

11:57:16

20 Q. And to be clear, that was for you to tell this
21 jury that you didn't think that the drift that
22 Mr. Johnson received was significant?

23 A. Well, to review the case and make opinion about
24 the case, you know. That's basically what it is for my
11:57:29 25 time.

1 Q. And for that 200 hours, you never actually
2 physically looked at the machine?

3 A. No, I did not.

4 Q. You didn't actually go to Benicia?

11:57:37 5 A. No, I did not.

6 Q. You didn't actually speak to Mr. Johnson, did
7 you?

8 A. No, I did not.

9 Q. You didn't interview his employers?

11:57:44 10 A. No, I did not.

11 Q. Didn't look at the community records of what his
12 spraying was at the school?

13 A. No, I did not.

14 THE COURT: Mr. Wisner, can I ask you to either
11:57:53 15 use the podium or remain at counsel table. Thank you.

16 Q. BY MR. WISNER: You didn't review any school
17 records?

18 A. No, I did not.

19 Q. You didn't review -- I mean, from what I can
11:58:02 20 tell, you looked at a photograph and you looked at one
21 deposition.

22 A. Well, yeah. I did review, you know, other
23 materials. You know, I wrote a report which you have a
24 copy of.

11:58:16 25 Q. Okay. Sir, you have a financial interest in the

1 use of herbicides, don't you?

2 A. I don't really. I'm a weed scientist. I got to
3 give my students, the growers, the best way to manage
4 weeds. So I don't have financial interest in that.

11:58:32

5 Q. Well, you own two patents, don't you?

6 A. Well, but I own the two patents, and those are
7 not about herbicide, about sorghum. I did develop a
8 sorghum that can be used in different setting.

9 MR. WISNER: Permission to approach, your Honor?

11:58:50

10 THE COURT: Yes.

11 MR. WISNER: Handing this witness Plaintiff's
12 Exhibit 1050.

13 Q. Do you see that, Doctor? This is one of your
14 patents; right?

11:59:04

15 A. Correct, sir.

16 MS. EDWARDS: Your Honor, we need to approach.

17 THE COURT: All right. Perhaps this is a good
18 time for the lunch recess.

11:59:13

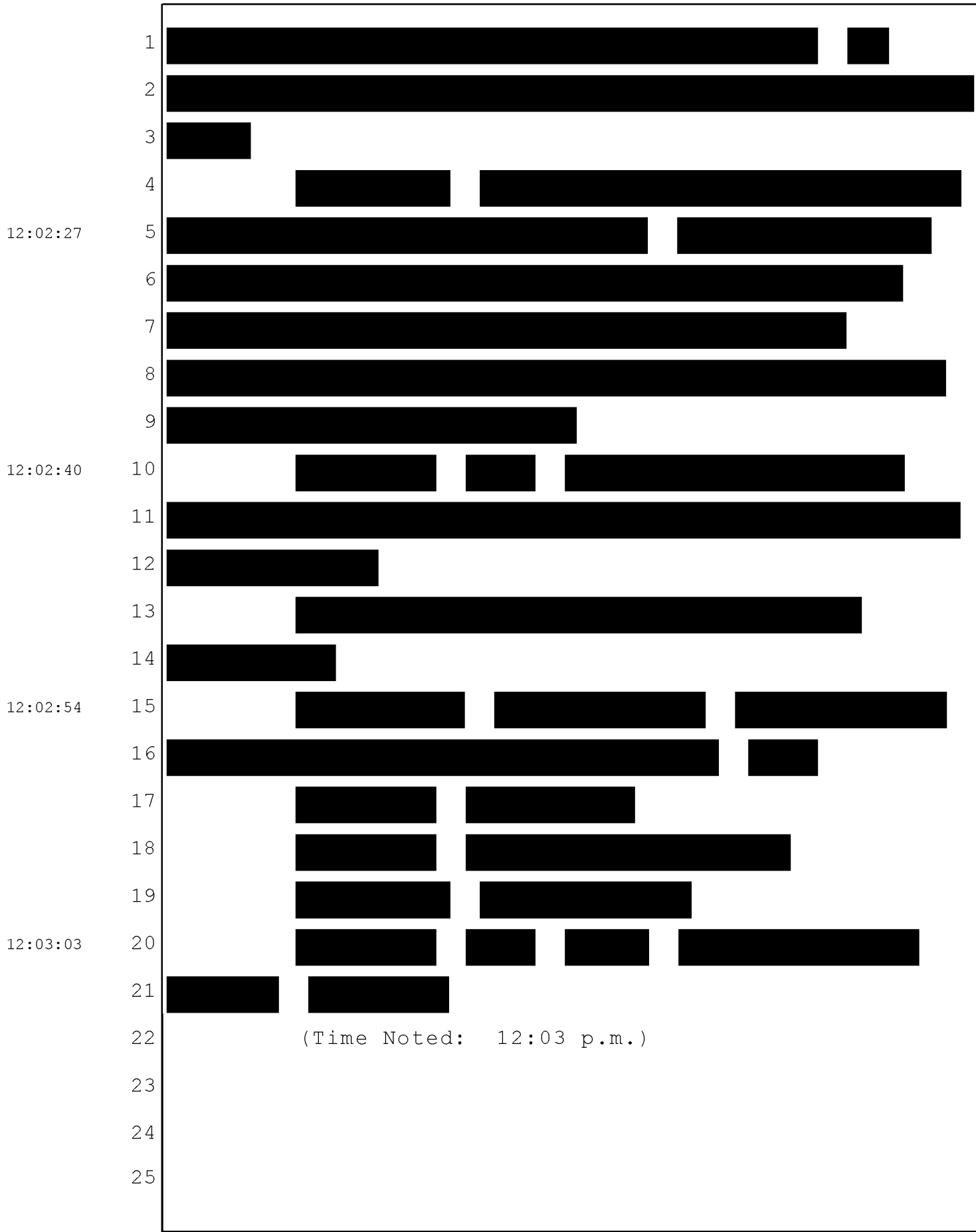
19 Ladies and Gentlemen, we're going to break now
20 for the lunch recess. Please remember: Do not discuss
21 the case, do not do any research. And we'll resume again
22 at 1:30.

23 (Sidebar.)

24 [REDACTED]

12:02:08

25 [REDACTED]



1 REPORTER'S CERTIFICATE

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I certify that the proceedings in the within-titled cause were taken at the time and place herein named; that the proceedings were reported by me, a duly Certified Shorthand Reporter of the State of California authorized to administer oaths and affirmations, and said proceedings were thereafter transcribed into typewriting.

I further certify that I am not of counsel or Attorney for either or any of the parties to said Proceedings, not in any way interested in the outcome of the cause named in said proceedings.

IN WITNESS WHEREOF, I have hereunto set my hand:
July 30th, 2018.

<%signature%>
Leslie Rockwood Rosas
Certified Shorthand Reporter
State of California
Certificate No. 3462