

BELDEN TECHNOLOGIES, INC. and,
BELDEN CDT (CANADA) INC.

Plaintiff,

v.

SUPERIOR ESSEX INC. and
SUPERIOR ESSEX
COMMUNICATIONS LP

Defendants.

JURY TRIAL DEMANDED

SUBJECT TO PROTECTIVE ORDER

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CommScope v. Belden
IPR2023-01061, -01062

Belden EX-2012

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I. EXPERT QUALIFICATIONS

1. A summary of my educational and professional experience is set forth in my Curriculum Vitae, the most current version of which is attached to this report as Exhibit A.
2. I have over 30 years of experience in the fields of electromagnetics, signal propagation, microelectronics, computer hardware, electronic circuit design, and power conversion. I received my S.B. in Electrical Engineering from the Massachusetts Institute of Technology (“MIT”) in 1973. I then received my M.S. in Electrical Engineering from the University of California at Berkeley in 1975. I also received my Ph.D. in Electrical Engineering from MIT in 1978.
3. I have authored or co-authored over 75 publications, including technical papers, articles, books, book chapters, and conference papers. I also hold five United States patents in a variety of technical fields. I am a registered Professional Engineer in the Commonwealth of Massachusetts.

II. COMPENSATION AND PRIOR TESTIMONY

4. For my work in connection with this case, I am being paid \$275 per hour. My fees are not contingent on the outcome of this case.
5. Over the past four years, I have testified in the following cases in deposition, hearing, or trial:

Monolithic Power Systems, Inc. v. O2 Micro International Ltd., U.S. District Court For the Northern District of California.

Status: Jury trial completed

Matter: Driving Circuits for Cold-Cathode Fluorescent Lamps

O2 Micro International v. Hon Hai Precision Industry Co., Ltd. Aka Foxconn and Ambit Microsystems Corporation. U.S. District Court for the Eastern District of Texas
Status: Summary judgment granted
Matter: Driving Circuits for Cold-Cathode Fluorescent Lamps

Clearwater Systems Corp. v. Evapco, Inc. U.S. District Court for the District of Connecticut
Status: Summary judgment granted
Matter: Magnetic Water Treatment Devices

Power Integrations v. System General Corp., "Certain Power Supply Controllers And Products Same", U.S. International Trade Commission
Status: Hearing Completed
Matter: Switching Power Supplies

Thompson v. BenQ, "Certain Color Television Receivers and Color Display Monitor, and Components Thereof", U.S. International Trade Commission.
Status: Hearing Completed
Matter: Circuits for consumer electronics

Pass & Seymour v. Shanghai Meihao Electric Inc. et al, "Certain Ground Fault Circuit Interrupters and Products Containing the Same", U.S. International Trade Commission.
Status: Hearing Completed
Matter: Ground Fault Circuit Interrupters (GFCIs)

Qimonda AG v Seagate Technology, et al., Certain Semiconductor Integrated Circuits and Products Containing Same", U.S. International Trade Commission
Status: Hearing Completed
Matter: Circuits for computer circuitry

Bushnell Inc, et al v The Brunton Company, Preliminary Injunction Hearing, US District Court for the District of Kansas.
Status: Pending
Matter: Laser Range Finders

Technical Wits, Inc v. Skynet Electronic Co. Ltd, et.al., US District Court for the District of Arizona.
Status: Pending
Matter: Switching Power Supplies

III. MATERIALS REVIEWED AND INFORMATION CONSIDERED

6. In connection with formulating my opinions in this matter, I have reviewed the following materials:

- U.S. Patents Nos. 5,424,491; 6,074,503; 6,570,095; 6,596,944; 6,998,537; 7,135,641; 7,179,999; and 7,339,116;
- Prosecution histories of the above listed patents-in-suit;
- Superior Essex's interrogatory responses pertaining to invalidity;
- The expert report of Les Baxter and the exhibits attached thereto, served September 23, 2009;
- Depositions taken in the case, including exhibits referred to in the depositions;
- Pleadings;
- Filings; and

7. I incorporate by reference Belden's interrogatory responses, including but not limited to those served on September 22, 2009.

8. I have met and conferred with Thomas Blackburn regarding various issues in this lawsuit. I consider Mr. Blackburn to be a person of ordinary skill in the art with regards to each of the Patents-in-Suit. Furthermore, it is my understanding that Mr. Blackburn has been retained by Belden as an expert witness in the matter.

9. I have spoken with Galen Gareis, one of the named inventors of the Patents-in-Suit.

10. I reserve the right and opportunity to supplement my opinions in this Report based upon any additional discovery, my additional review of new or existing discovery materials, the Court's claim construction order, and in response to any opinions, arguments and/or evidence offered by defendants in discovery or at trial.

IV. USE OF DEMONSTRATIVES

11. I expect that I may refer to the above referenced materials and those specifically cited in this report, as well as representative photographs, charts, graphs, schematics, layouts, animations,

and/or models at trial and deposition that I may create to support and explain my testimony set forth herein. I may also use such materials to explain the inventions, patents, relevant technology areas, and/or other matters that may assist the Court and jury in understanding the technology and patents.

V. SUBJECT MATTER OF TESTIMONY

12. I understand that, in this case, plaintiffs Belden Technologies, Inc. and Belden CDT (Canada) Inc. (collectively “Belden” or “plaintiffs”) are asserting eight related U.S. patents – 5,424,491 (the “‘491 Patent-In-Suit”); 6,074,503 (the “‘503 Patent-In-Suit”); 6,570,095 (the “‘095 Patent-In-Suit”); 6,596,944 (the “‘944 Patent-In-Suit”); 6,998,537 (the “‘537 Patent-In-Suit”); 7,135,641 (the “‘641 Patent-In-Suit”); 7,179,999 (the “‘999 Patent-In-Suit”); and 7,339,116 (the “‘116 Patent-In-Suit”) (collectively the “patents-in-suit”) against defendants Superior Essex Inc. and Superior Essex Communications LP (collectively “Superior Essex” or “defendants”).

13. I further understand that, in this case, Superior Essex has alleged that claim 1 of the ‘503 Patent-In-Suit, claims 1 and 8 of the ‘944 Patent-In-Suit, claim 13 of the ‘641 Patent-In-Suit, claims 4 and 7 of the ‘116 Patent-In-Suit, claims 1 and 2 of the ‘491 Patent-In-Suit, claims 27 and 31 of the ‘095 Patent-In-Suit, claim 19 of the ‘537 Patent-In-Suit, and claim 2 of the ‘999 Patent-In-Suit are invalid.

14. I have been asked to give my opinion regarding the validity of claims 1 and 8 of the ‘944 Patent-In-Suit, claim 13 of the ‘641 Patent-In-Suit, claims 4 and 7 of the ‘116 Patent-In-Suit, claims 1 and 2 of the ‘491 Patent-In-Suit, claims 27 and 31 of the ‘095 Patent-In-Suit, claim 19 of the ‘537 Patent-In-Suit, and claim 2 of the ‘999 Patent-In-Suit.

15. To the extent that Mr. Baxter opines on the validity of claims other than claim 1 of the '503 Patent-In-Suit, claims 1 and 8 of the '944 Patent-In-Suit, claim 13 of the '641 Patent-In-Suit, claims 4 and 7 of the '116 Patent-In-Suit, claims 1 and 2 of the '491 Patent-In-Suit, claims 27 and 31 of the '095 Patent-In-Suit, claim 19 of the '537 Patent-In-Suit, and claim 2 of the '999 Patent-In-Suit, I reserve the right to supplement my report to address the validity of any additional patent claim.

16. On September 23, 2009, I completed and executed an expert report concerning infringement of seven Belden patents. This expert report concerns the validity of those Belden patents. I include and incorporate by reference here my preceding expert report.

VI. BACKGROUND TECHNOLOGY

17. The next several paragraphs provide background information on some of the technical concepts that will be discussed in this report.

A. Digital Communications

18. Data transmission, sometimes referred to as digital transmission or digital communications, is the physical transfer of data (a digital bit stream) over a transmission medium. Examples of such media include copper wires and optical fibers. The data is often represented as an electromagnetic signal, such as an electrical voltage signal or an infra-red signal.

19. Analog communications represents a continuously varying signal, such as a continuously varying voltages or light intensity; whereas, a digital transmission can be broken down into discrete messages. The messages are either represented by a sequence of pulses by means of a line code (baseband transmission), or by a limited set of analogue wave forms (passband

transmission), using a digital modulation method. According to the most common definition of digital signal, both baseband and passband signals representing bit-streams are considered as digital transmission.

20. Data transmitted may be digital messages originating from a data source, such as a computer. The data may also result from an analog signal such as a phone call or a video signal that has been digitized into a bit-stream for example using pulse-code modulation (PCM) or more advanced source coding (data compression) schemes. This source coding and decoding is carried out by codec equipment.

21. Depending upon the particular modulation scheme used, performance of the transmission media can have a dramatic impact on overall performance. One such performance criteria is the attenuation profile of the transmission media (attenuation vs. frequency). Attenuation generally decreases at higher frequencies. The point at which the decrease is reduced by some standard measure (e.g., 3 dB) represents a corner frequency, or an upper limit to a pass band of the transmission media. For analog signals, such as voice, this corner frequency can be as low as about 2 kHz, while still providing acceptable performance. If that same signal is digitized with 16 bit resolution, then a data bandwidth of 32 kbps would be necessary. Thus, the data bandwidth for the same information is substantially greater for the digitized version than the analog version.

22. Data cables generally carry network traffic of today's computer and communication systems. Accordingly, data cables are expected to have a much greater bandwidth or data rate than their analog counterparts. For example, some of the most common standards today, such as

EIA/TIA CAT-5 and CAT-6 industry standards, identify minimum bandwidth requirement of 100 MHz and greater.

B. Optical Fibers

23. Optical fibers are dielectric waveguide structures used to confine and guide light.

Generally, optical fibers offer a low transmission loss, a high bandwidth or data rate, and a high mechanical stability. Optical fibers have properties that make them attractive replacements for copper wire. For example, optical fibers have extremely wide bandwidth, small diameter, and light weight. Additionally, they do not radiate electromagnetic energy and therefore offer advantages to radio frequency interference (RFI) performance. The bandwidth of an optical fiber depends upon its construction, but can easily vary from tens to hundreds of GHz. See John M. Senior, Optical Fiber Communications 80 (1985), attached as Exhibit B.

C. Loss Tangent

24. The loss tangent is a parameter of a dielectric material that quantifies its inherent dissipation of electromagnetic energy. For a dielectric material having a conductivity σ , and a dielectric constant ϵ , the loss tangent can be calculated as,

$$\tan \delta = \sigma / (2\pi f \epsilon),$$

in which 'f' is the frequency. For a lossless dielectric, $\sigma = 0$, such that the loss tangent would also be 0. The greater the conductivity, however, the greater the loss tangent will be. Larger values of loss tangent indicate a greater loss, or attenuation of electromagnetic energy within the dielectric material. See David K. Cheng, Field and Wave Electromagnetics 300 (1983), attached as Exhibit C.

D. Shielding

25. A shielded cable, generally indicates an electrical cable with one or more insulated conductors (e.g., one or more insulated twisted pairs of conductors), enclosed by a common conductive layer. The conductive layer may be a metal foil, a laminated metal foil, a braided jacket, or an electrically conductive screen. See, e.g., Solving Signal Problems, <http://www.belden.com/pdfs/Techpprs/tpbroad.htm>, attached as Exhibit D. The conductive layer acts as a Faraday cage, effectively isolating the insulated conductors within the cable from anything outside the cable. Insulated conductors within the shield would be isolated from noise and interference of other devices, such as other cables (i.e., improved alien cross talk). Likewise, the shield would reduce electromagnetic radiation from the shielded insulated conductors from affecting other devices.

26. It is also well recognized that placing a conductive screen, or ground plane, in close proximity to unshielded twisted pair (UTP) will have an impact on the electrical performance of the UTP. As described in Mr. Baxter's report, parameters such as the characteristic impedance are functions of the inductance and capacitance of the UTP. The presence of a ground plane in close proximity will alter these values and thereby affect, at least, the characteristic impedance. The effects on the inductance and capacitance (L & C) would be a function of $1/r^2$, with r being the spacing between the UTP and the cable shield. Thus, for closely spaced shields, the L & C and related parameters, such as the characteristic impedance would vary dramatically. As such electrical performance values are specified to within a high tolerance for data cables, the presence of a shield will tend to complicate cable design.

VII. LEVEL OF ORDINARY SKILL IN THE ART

27. For the '944, '641, '116, '491, '095, '537, and '999, a person of ordinary skill in the art at the time of the invention would have been a person having an undergraduate degree in electrical engineering and approximately two years of industry experience (or the equivalent.)

28. As used above, the phrase "or the equivalent" is intended to mean that the required levels of educational and industry experience are on a sliding scale relative to each other – *e.g.*, a person of ordinary skill could potentially have no educational degree but more than two years of industry experience, or conversely could have something higher than an undergraduate degree but no industry experience.

VIII. APPLICABLE LEGAL STANDARDS

29. Based on my discussions with counsel for Belden, I understand the following legal standards are among those that are applicable to a determination as to the validity of any patent claim.

A. The Presumption Of Validity And Standards Of Proof

30. Based on my discussions with counsel for Belden, I understand that each separate claim of an issued patent is presumed valid, and that clear and convincing evidence of invalidity is required in order to overcome that presumption. My understanding of clear and convincing evidence is that it is a standard of proof requiring the fact finder to have a clear conviction that a fact is highly probable.

31. My further understanding is that if a particular prior art reference was art of record before the PTO Examiner during prosecution of a relevant patent application, or is cumulative of other

art that was before the Examiner, then an accused infringer bears an even heavier burden of proof than the clear and convincing evidence standard when seeking to prove invalidity on the basis of such a prior art reference. In this regard, I understand a reference to be cumulative when it contains information that is already of record in the application.

32. It is also my understanding is that non-final decisions made by a PTO Examiner in re-examination proceedings are of little to no evidentiary relevance in a co-pending litigation, and that such non-final decisions have been regarded by the courts as being more prejudicial than probative with regard to issues such as validity that are implicated by a co-pending litigation.

B. Anticipation

33. Based on my discussions with counsel for Belden, I understand that for a patent claim to be invalid as “anticipated” or “not novel” under 35 U.S.C. § 102, it must be established by clear and convincing evidence that each and every limitation of the claim must be found in a single prior art reference. If a piece of prior art does not expressly disclose every element of the invention, that reference can nevertheless still inherently anticipate a claim if a person of ordinary skill in the art would have necessarily understood the reference to implicitly include the claimed element.

34. In order for a reference to be sufficiently analogous or pertinent to qualify as prior art for purposes of assessing the validity of a patent claim, my understanding is that the reference must either be within the field of the inventor’s endeavor, or at least be reasonably related to a particular problem that the inventor faced or addressed when conceiving of the patented invention.

C. Obviousness

35. Based on my discussions with counsel for Belden, I understand that a patent claim may be invalid under 35 U.S.C. § 103 if it is established by clear and convincing evidence that the invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. My understanding is that it is not permissible to use hindsight or *ex post* reasoning in assessing whether a claimed invention is invalid for obviousness. For example, an invention should not be considered in view of what persons of ordinary skill would know today, nor can it be reconstructed after the fact by reading into the prior art the teachings of the invention at issue.

36. I understand that obviousness cannot be proven merely by showing that an invention is a combination of elements that were already previously known in the prior art. Rather, an alleged infringer must further establish by clear and convincing evidence that there were apparent reasons that would have prompted a person of ordinary skill at the time of the invention to have combined these known elements in the fashion claimed by the patent. Such reasons might include, for example, teachings, suggestions, or motivations to combine that would have been apparent to a person of ordinary skill. In addition, my understanding is that an alleged infringer must also show by clear and convincing evidence that a person of ordinary skill would have viewed such a combination as leading to predictable results and that would have a reasonable expectation of success.

37. I have been informed that the presence or absence of the following additional secondary considerations are also relevant in determining whether or not an invention would have been obvious at the time it was made: (a) commercial success of a product due to the merits of the claimed invention; (b) a long felt need for the solution provided by the claimed invention; (c)

unsuccessful attempts by others to find the solution provided by the claimed invention; (d) copying of the claimed invention by others; (e) unexpected and superior results from the claimed invention; and (f) acceptance by others of the claimed invention as shown by praise from others in the field or from the licensing of the claimed invention.

D. Written Description

38. Based on my discussions with counsel for Belden, I understand that a patent may be invalid under 35 U.S.C. § 112 ¶ 1, if it is established by clear and convincing evidence that the patent specification does not include a written description of the claimed invention. I further understand that in order to satisfy this requirement, a patentee need only describe his or her invention in sufficient detail to allow a person skilled in the art to visualize or recognize what is claimed.

E. Dependent And Independent Claims

39. I understand that a claim in dependent form shall be construed to incorporate by reference all the limitations of the independent claim to which it refers. Accordingly, I understand that in order to prove an a dependent claim invalid, a prior art reference or combination of references must disclose each and every claim limitation of the dependent claim, in addition each to and every claim limitation of the independent claim to which it refers.

F. Claim Construction

40. I understand that the Court has not yet construed the disputed claim terms in this litigation. I therefore reserve the right to supplement or modify my opinions and this report as necessary subsequent to the Court issuing its claim construction ruling.

90.

[REDACTED]

H. Claims 1 And 8 Are Not Anticipated By The ‘629 Patent

91. Mr. Baxter opines that Claims 1 and 8 of the ‘629 Patent-In-Suit are invalid within the meaning of 35 U.S.C. §102 because they are allegedly anticipated by U.S. Patent No. 4,755,629 (the “‘629 Patent”) See (Baxter Rep. at ¶¶ 123-124). I disagree with this opinion because the ‘629 Patent fails to disclose either expressly or inherently each and every limitation recited in Claims 1 and 8. For example, as discussed in greater detail below, the ‘629 Patent fails to disclose at least the limitation present in claim elements 1(b)-(d) which calls for a “**non-conductive central core**,” as well as the limitation contained in claim element 1(c) which requires “**an outer jacket that maintains the plurality of twisted pairs of conductors in position with respect to the non-conductive central core**.”

92. Claim elements 1(b)-(d) recite “**a non-conductive central core**.” In contrast, the ‘629 Patent describes cables having individual buffer portions, such as tubular members 51-51 for each conductor pair to achieve lower attenuation and improved crosstalk performance. (‘629 Patent, col. 7, ll. 52-54) Figure 6 of the ‘629 Patent illustrates replacement of the tubular members 51-51 with a preform 55 comprising dual tubular buffer portions or members 56-56, which are joined together. (‘629 Patent, col. 5, l. 65-col. 6, l. 1.) (Figure 3, below.)

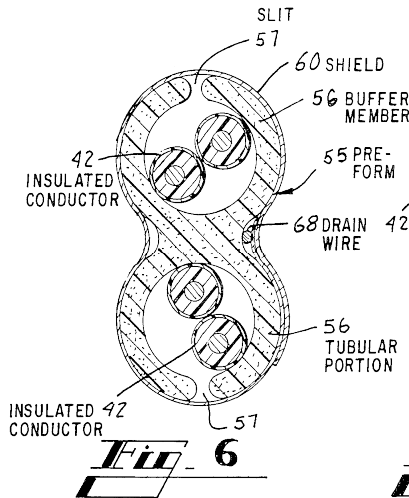


Figure 3. Figure 6 of the ‘629 patent.

93. Neither the dual tubular buffer, nor the preform of Figure 6 of the ‘629 Patent (*see* Figure 3, above) provide a “central core.” Rather, all of the buffer portions described in the ‘629 Patent extend substantially around each pair of insulated conductors. By extending around the conductors, substantial portions of the various buffer portions reside along the outer perimeter of the cable. Indeed, the buffer portions could not be considered a central core because they completely surround the various insulated conductors.

94. Claim element 1(c) also recites “an outer jacket that maintains the plurality of twisted pairs of conductors in position with respect to the non-conductive central core.” The ‘629 Patent, on the other hand, describes dual tubular members 51-51 or a preform 55 having slits 57 or an S-shape into which the insulated conductors can be inserted. It would appear that if anything is maintaining the insulated conductors in position, it is the buffer itself and not the outer jacket.

95. I also disagree with Mr. Baxter’s opinion that Claim 8 of the ‘944 Patent-In-Suit is anticipated by the ‘629 Patent. *See* (Baxter Rep. at ¶ 125.) As Claim 8 depends from Claim 1, it is not anticipated by the ‘629 Patent for at least the same reasons as was Claim 1. Additionally,

Claim 8 recites that the non-conductive central core comprises four fins, each fin extending radially outward from a center of the core at *substantially right angles* to at least one other of the four fins.” Assuming for the sake of argument that the buffer systems shown in Figure 6 of the ‘629 Patent (*see* Figure 3, above) can be considered a central core -- even though they cannot -- the portions that extend away from the central region do not extend radially outward from a center of the core at substantially right angles to at least one other of the four fins. Instead, the protrusions extend out along curved trajectories. Even considering the base portions only, each of the protrusion of the pair of top and bottom protrusions extends outward from the center region at what would appear to be an angle greater than 90 degrees. Likewise, an angle formed between adjacent protrusions of the top and bottom protrusions extend outward from the center region at what would appear to be an angle less than 90 degrees. Simply put, the form of the protrusions shown in Fig. 3 is anything but a set of right-angular fins.

96. Finally, I disagree with Mr. Baxter’s contention that the “central core” is clearly shown in Figures 6 and 7 of the ‘629 patent. See (Baxter Rep. at ¶ 128.) As discussed previously, neither the dual tubular buffer nor the preform of Figure 6 of the ‘629 patent (Figure 3, above), nor the S-shaped preform of Figure 7, even when replaced by a tape, provide a “central core.” Rather, all of the buffer portions described in the ‘629 Patent extend substantially around each pair of insulated conductors.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

XIII. THE '095 PATENT-IN-SUIT

A. Claim 27 Is Not Anticipated By The '866 Patent

238. Mr. Baxter opines that Claim 27 of the '095 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §102 because it is allegedly anticipated by German Pat. DE 297 19 866 A1 (the "'866 Patent'") See (Baxter Rep. at ¶¶ 242-243 & Exh. 50). I disagree with this opinion because the '866 Patent fails to disclose either expressly or inherently each and every limitation recited in Claim 27. For example, as discussed in greater detail below, the '866 Patent fails to disclose at least the **"dielectric pair separator"** limitation recited in claim elements 27(c) – (f), as well as its **"substantially flat"** limitation recited in claim element 27(c).

239. As an initial matter, Mr. Baxter argues that the '866 Patent "was *not* cumulative with art that was in front of the Patent Office." (Baxter Rep. at ¶ 242, p. 163). I disagree because to the extent that it is relevant, the '866 Patent contains information that was already before the Examiner. I have observed from the file history of the '095 Patent-In-Suit that a first office action was mailed from the Patent Office on October 22, 2001. In that action, the Examiner rejected claim 24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,969,295 to Boucino et al. (the "Boucino Patent") in view of U.S. Pat. No. 3,911,200 to Simons et al. (the "Simons Patent"). The Boucino Patent describes a "cross-web" type separator and the Simons Patent describes laminated metal foils. In the rejection, the Examiner relied upon the Simons Patent to cure the deficiency of the Boucino Patent by providing a separator consisting of a dielectric layer and a conductive layer folded and arranged to provide a plurality of grooves. Thus, the '866 Patent is cumulative of Simons et al. reference, because it also recites separator consisting of a dielectric layer and a conductive layer (*i.e.*, partial shields consisting of "aluminum foils laminated by plastic").

240. Original claim 24, produced in part below, recited a separator including “a dielectric layer and a conductive layer.”

24. A data communications cable comprising:
a first twisted pair of insulated conductors;
a second twisted pair of insulated conductors;
a dielectric pair separator consisting of a dielectric layer and a conductive layer
disposed between the first twisted pair and the second twisted pair of insulated
conductors, the dielectric pair separator being folded and arranged to provide a plurality
of grooves extending along a longitudinal length of the data communications cable, the
dielectric pair separator providing a sufficient spacing between the first twisted pair of
insulated conductors and the second twisted pair of insulated conductors so as to provide
a desired crosstalk isolation between the first twisted pair of insulated conductors and the
second twisted pair of insulated conductors;
a jacket assembly enclosing the first twisted pair of insulated conductors, the
second twisted pair of insulated conductors and the dielectric pair separator; and
wherein the plurality of grooves do not form completely enclosed channels.

241. Original claim 1, also produced below, was nearly identical to original claim 24, except
that its dielectric pair separator did not include a conductive layer.

1. A data communications cable comprising:
 - a first twisted pair of insulated conductors;
 - a second twisted pair of insulated conductors;
 - a dielectric pair separator consisting of a dielectric layer disposed between the first twisted pair and the second twisted pair of insulated conductors, the dielectric pair separator being folded and arranged to provide a plurality of grooves extending along a longitudinal length of the data communications cable, the dielectric pair separator providing a sufficient spacing between the first twisted pair of insulated conductors and the second twisted pair of insulated conductors so as to provide a desired crosstalk isolation between the first twisted pair of insulated conductors and the second twisted pair of insulated conductors;
 - a jacket assembly enclosing the first twisted pair of insulated conductors, the second twisted pair of insulated conductors and the dielectric pair separator; and
 - wherein the plurality of grooves do not form completely enclosed channels.

242. The Examiner considered the Simons Patent in the rejection of claim 24, but failed to reject claim 1 or any of the other claims not reciting a separator having a conductive layer. Had the Examiner taken the position suggested by the Baxter Report that the laminated metal foils are dielectric separator, other claims, such as claim 1 would have also been rejected for similar reasons, which they were not. Thus, the Examiner agreed with the position that laminated metal foils disclosed in the Simons Patent are not dielectric (*i.e.*, they are conductive, and hence not dielectric). There is no reason to change that position now, nor to consider the laminated metal foils disclosed in the '866 Patent as different from those disclosed in the Simons Patent. Thus, the '866 Patent is merely cumulative to the art disclosing conductive shielding foils that has already been considered by the Examiner, because the Simons Patent discloses similar laminated metal foil shielding tapes.

243. Pursuant to my understanding of the law as presented above, given that the '866 Patent is merely cumulative of art that was before the Examiner, Mr. Baxter must meet a burden of proof

on invalidity even heavier than the usual clear and convincing evidence standard. In my view, for at least the reasons that follow, Mr. Baxter is unable to meet this heightened burden.

244. First, Mr. Baxter is unable to meet his heightened burden of showing that the ‘866 Patent discloses the “**dielectric pair separator**” required by claim elements 27(c) – (f). In this regard, Mr. Baxter argues that the cable disclosed in the ‘866 Patent includes two dielectric pair separators that separate the first and second twisted pairs of conductors. (Baxter Rep. at ¶ 243). Moreover, Mr. Baxter further argues that the ‘866 Patent discloses that the pair separator may be made of a metal foil, such as aluminum, or a metal foil laminated by plastic. (*Id.*). But I have reviewed the English translation of the ‘866 Patent provided as Exhibit 50 to Mr. Baxter’s Report and have observed that the ‘866 Patent refers to a “shield” and *not* to a dielectric pair separator as recited in Claim 27. *See, e.g.*, (‘866 Patent, Eng. Transl. p. 1, ll. 4-6).

245. In the electrical arts, a dielectric is well known as an insulator -- essentially the opposite of a conductor with respect to electrical properties. The Merriam Webster Online Dictionary (www.merriam-webster.com) defines dielectric as “a nonconductor of direct electrical current.” A shield, on the other hand, is fundamentally and structurally different from a dielectric (*i.e.*, an insulator) in that it necessarily includes an electrically conductive component. The ‘866 Patent is quite consistent in this regard, describing the shield as “preferably consisting of metal foils, especially aluminum foils or aluminum foils laminated by plastic” (‘866 Patent, Eng. transl. p. 5, ll. 9-11). Metal foils such as those described in the ‘866 Patent are known to be good conductors of electricity, and for at least that reason would not be considered insulators. Even an aluminum foil laminated by a plastic represents a shield and not a dielectric, because it includes an electrically conductive layer of aluminum foil.

246. In my opinion, therefore, claim 27 is not anticipated by the '866 Patent, at least because a dielectric pair separator (*i.e.*, a dielectric pair separator without a conductive layer) cannot be found within the reference. Mr. Baxter contends that the first named inventor of the '095 Patent-In-Suit, William Clark ("Clark"), testified that a dielectric pair separator could be a "plastic/metal bi-laminate." I have reviewed the testimony in question and found that this particular quote has been taken out of context. To offset the quoted language, Clark also stated that *he* was "interpreting [a dielectric] as an all dielectric pair separator" further adding that "it cannot be conductive in any way." See (Clark Dep., p. 141, ll. 11-13). Clark further added that "we would have to go into the body of the spec to find out how "dielectric pair separator" is being described." (Id., p. 143, ll. 1-6). Clark admits that there is such a thing as "a dielectric separator that can have a shield on it" (Id., p. 143, ll. 13-14), adding that *he* probably would have called it a "pair separator" (Id., p. 144, ll. 8-9). Thus, Clark's testimony supports that he would consider a dielectric pair separator as not being conductive in any way, and that if the dielectric separator had a shield on it, he would have referred to it as a "pair separator."

247. I have been informed that claims are interpreted according to well established rules of claim interpretation and that such rules start with the language of the claim itself. I also understand that in some instances, patent applicants can be their own lexicographers, identifying within the application itself a preferred definition for a term that may or may not be consistent with a commonly accepted definition. It is also my understanding that should the inventor choose to define a term, the inventor must do so "with reasonable clarity, deliberateness, and precision" and, if done, must "'set out his uncommon definition in some manner within the patent disclosure' so as to give one of ordinary skill in the art notice of the change" in meaning) (MPEP

§ 2111.01 (IV), quoting *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88, 21 USPQ2d 1383, 1386 (Fed. Cir. 1992)).

248. In this instance, claim 27 plainly recites a “*dielectric* pair separator.” According to its plain meaning, the claim recites “dielectric,” which would not include any electrical conductor such as a metal foil or a conducting shield. The specification is also quite clear in its usage of the term dielectric pair separator, because the specification also fails to describe or even suggest that the term could include an electrical conductor. Rather, the twisted pairs are described as being separated by “a low dielectric constant, low dissipation factor, polymer” (col. 4, ll. 62-63) and again as “a flame-retardant, low-dielectric constant, low dissipation factor, foamed polymer tape” (col. 5, ll. 24-26). The only suggestion that the dielectric pair separator can be associated with a conductive layer is provided within Claims 24 and 26. Any interpretation that Claim 27 includes a conductive layer would contradict the consistent usage throughout the specification and remaining claims, such that one could hardly perceive the applicant had somehow re-defined dielectric to also include a conductive layer.

249. Even if Clark, as the first named inventor, were to perceive that a dielectric pair separator includes a conductive layer as Mr. Baxter suggests, that fact would be of little relevance in a proper interpretation of the claim. I have been informed that interpretation of the claim should be conducted with regard to the time of the invention, which would be at least no later than the priority filing date of February 25, 1999. Furthermore, even if Mr. Clark had interpreted dielectric pair separator in the way suggested by Mr. Baxter at the time of invention, (and there is nothing in the record to suggest that he did), it is my understanding that the standard for interpretation would still be what one of ordinary skill in the art would have understood at that time. See (MPEP § 2111.01 (III)). A dielectric pair separator is an *all* dielectric pair separator,

and any such structure that is all dielectric neither includes a conductive layer, nor serves as a shield.

250. Mr. Baxter is also unable to meet his heightened burden of showing that the claimed dielectric pair separator is “**substantially flat**” within the meaning of claim element 27(c). In this regard, Mr. Baxter alleges that the ‘095 Patent-In-Suit defines the pair separator of FIG. 6 of the patent as “flat,” quoting the ‘095 Patent-In-Suit at col. 6, ll. 12-15 (“In the embodiment of the cable of FIGURE 6, the pair separator 14 is a flat configurable tape used as a core filler, that is shaped to have the illustrated profile ...”). But Mr. Baxter has incorrectly interpreted that “a flat configurable tape *used* as a core filler, that is shaped to have the illustrated profile” is equivalent to “the configurable pair separator *being* substantially flat.” The configurable tape is initially flat, but it is not a pair separator until after it has been shaped to have the illustrated core profile. After being shaped, as judged from an inspection of FIG. 6 from the ‘866 Patent, the pair separator in the latter patent is not flat. Rather, it has a cruciform shape in cross section, defining four quadrants.

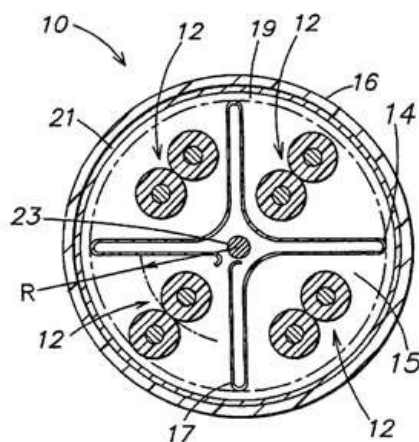


FIG. 6

251. The claim, however, recites that the configurable pair separator [itself] is substantially flat. This could only mean that the configurable pair separator, itself, is flat *after having been introduced into the cable*, as illustrated in FIGs. 4 and 5. A person skilled in the art would understand that the configurable pair separator could have a helical twist, especially when found in a twisted cable, but the pair separator would still be substantially flat in the cross-sectional profile, as is the case for the embodiments illustrated in FIGs. 4 and 5. Accordingly, the ‘866 Patent fails to anticipate claim 27 at least because the ‘866 Patent fails to disclose a “configurable dielectric pair separator being substantially flat.”

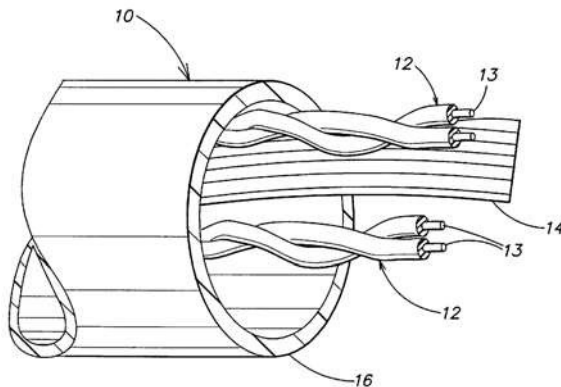


FIG. 4

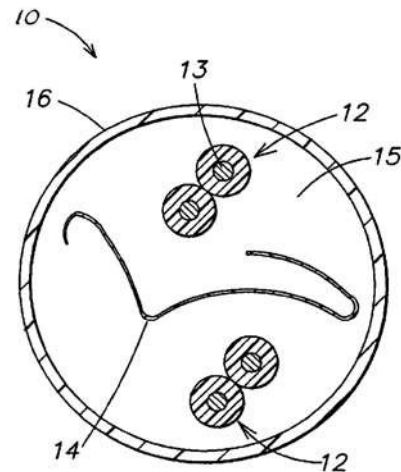


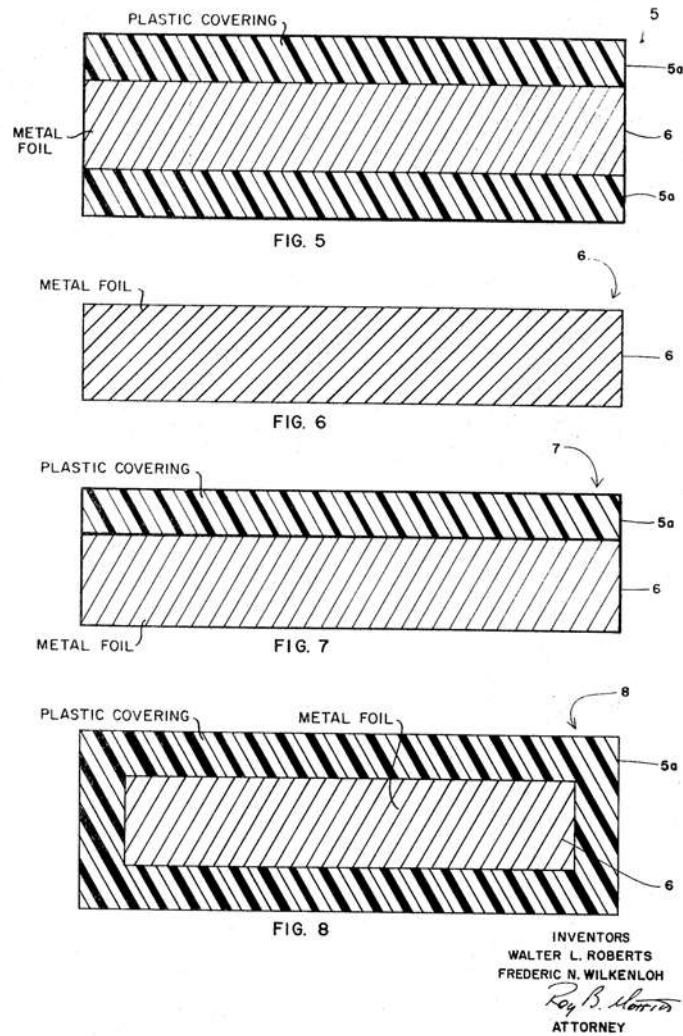
FIG. 5

B. Claim 27 Is Not Obvious Over A Combination Of The ‘683 And ‘866 Patents

252. Mr. Baxter opines that Claim 27 of the ‘095 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of prior art U.S. Patent No. 3,622,683 (“the ‘683 Patent”) and the ‘866 Patent. See (Baxter Rep. at ¶ 243). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary

skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 27 of the '095 Patent-In-Suit. Moreover, it is my further contrary conclusion that even if such a reason had existed, the combined elements of these two prior art references would not yield the subject matter as a whole recited in Claim 27 of the '095 Patent-In-Suit.

253. Mr. Baxter fails to offer any credible apparent reasons why a person of ordinary skill in the art at the time of the invention would have been prompted to combine the disclosures of the '683 and '866 Patents to arrive at a separator that includes metal foil totally encased in plastic. In this regard, Mr. Baxter identifies various tape/metal foil configurations in Figure 63, p. 166 (taken from the '683 Patent, reproduced below), suggesting that one skilled in the art would have been motivated to try the finite number of identified, predictable, solutions ... represented by the structures shown in Figure 63 *and the one additional structure with no metal component at all*. For motivation, Mr. Baxter argues that removing the metallic component would have been a way to reduce material costs.



254. Contrary to Mr. Baxter's assertions, however, one of ordinary skill in the art would not have combined the references as suggested in the interest of removing the metallic component as a way to reduce material costs. First, neither the '866 Patent nor the '683 Patent disclose or suggest providing a shield without some sort of metal foil. The '683 Patent is quite careful to detail all of the various combinations of a shield with a dielectric, choosing not to address any such shields without the conductive layer. Indeed, removal of the metallic component, as suggested in the Baxter Report, would not be obvious because it would defeat the purpose of using a shield. In fact, of the 37 claims found in the '683 Patent, every one of the independent

claims discloses a shield, as do most of the dependent claims. Accordingly, one would not be motivated to combine the '683 and the '866 references as suggested, and even if they did, they would not arrive at the claimed invention.

255. In addition, I also conclude that Mr. Baxter's opinion that a combination of the '683 and '866 Patents would render Claim 27 obvious is incorrect because it is incompatible with the secondary considerations of non-obviousness that are present on the record in this case. These secondary considerations are described in greater detail below, and also in Belden's supplemental responses to Superior Essex's Interrogatory No. 6 served on September 22, 2009 which are expressly incorporated by reference herein.

256. The commercial success of the '095 inventions is evidenced by the fact that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

257. Indeed, the success of embodying products, whether sold by Belden or by another, is in part due to a long felt and persistent need in the market that the patented inventions satisfied. In particular, the patented inventions enabled Belden to market high-speed data cables that performed at or above standards promulgated by the Telecommunications Industry Association (the "TIA") in conjunction with the Electronics Industry Association (the TIA/EIA"). (Niemiera Dep. 112:1-10.) In the high-speed data cable industry, performance above an industry

specification is termed “headroom.” Specifically, proposed revisions to the TIA/EIA-568-A standard, known as “Category 6,” required telecommunications cables to have in excess of 40 dB of crosstalk isolation between the twisted pairs of conductors at 100 MHz.

258. At the time of invention, the preferred approach for meeting the higher data transmission rate requirements while achieving levels of crosstalk isolation dictated by evolving industry standards was to employ a centrally located pre-shaped support within the cable, typically in the shape of an “+”, which provided geometric separation among the twisted pairs. However, cables that included a “+” shaped separator (hereinafter a “cross-web” separator) were relatively rigid and more expensive to make due to increased material costs.

259. Other attempts were made at address the problem of crosstalk utilizing flat cable configurations, elongated fins protruding inward from the cable jacket, and rod fillers disposed between the conductor pairs. Each of these approaches presented various disadvantages including manufacturing difficulties, inconsistent performance and commercial infeasibility. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

260. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

261. In addition, each of the embodied inventions produced unexpected results given previously high levels of industry skepticism. Members of the high-speed data cable industry were particularly skeptical of the embodied inventions' merits and whether they would allow a cable to achieve comparable electrical performance to a cable with a cross-web separator. Although the test results were met with industry surprise, using the embodied inventions, the Belden entities demonstrated that enhanced Category 6 performance was achievable using a tape separator.

C. Claim 31 Is Not Obvious Over A Combination Of The '866 And '748 Patents

262. Mr. Baxter opines that Claim 31 of the '641 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of the '866 Patent and U.S. Patent No. 5,670,748 (the "'748 Patent"). See (Baxter Rep. at ¶ 244 & Exh. 53). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 31 of the '095 Patent-In-Suit. Moreover, it is my further contrary

conclusion that even if such a reason had existed, the combined elements of these two prior art references would not yield the subject matter as a whole recited in Claim 31 of the '095 Patent-In-Suit.

263. Mr. Baxter offers no new arguments as to precisely how the *shield* disclosed in the '866 Patent could possibly qualify as the *dielectric* pair separator recited in claim elements 31(b) – (d). As discussed above in relation to Claim 27, I believe the '866 Patent is distinguishable from Claim 31, because it describes that the pair separator may be made of a metal foil, such as aluminum, or a metal foil laminated by plastic. Notwithstanding the Clark deposition, for the reasons set forth above, the shield cannot be a dielectric separator because it includes a metal foil. There is nothing in the '866 Patent that teaches or suggests removing the metal foil. Indeed, it would not be obvious to remove the conductive layer of the '866 patent as it would defeat the purpose of having a shield.

264. Mr. Baxter argues that one of ordinary skill in the art would have known to combine the foamed polymer disclosed in the '748 Patent with the pair separator of the '866 Patent. To the extent the Baxter Report suggests adding a foamed polymer layer or replacing the plastic layer of the '866 Patent with the foamed polymer of the '748 Patent, such a combination would still leave intact the metal foil. There is nothing in the '748 to teach or suggest that a shield does not include a conductive layer. Thus, even if the references are combined, they do not include all of the limitations of the claim.

265. Moreover, the '748 Patent describes flame retardant and smoke suppressant electrical insulation composition for an electrical conductor. The '748 Patent describes a foamed polymeric inner layer 14 surrounding the central conductor 12, with an outer layer 16 comprising

a halogenated polymeric material and a smoke suppressant additive surrounding the inner layer 14 (col. 5, ll. 26-29), or as a jacketing material over paired conductors (col. 6, l. 41). Thus, the foamed polymer material is always described as being laid down upon another structure, such as the central conductor, or the cable. Neither the '866 nor '748 Patents suggest that one of ordinary skill in the art would know how to form a substantially flat dielectric tape formed of a foamed polymer, as is recited in the claim, and Mr. Baxter identifies no other source for such knowledge. The reference describes forming it as an insulation or jacketing about or upon some other structure. There would be no likelihood of success in forming the flat dielectric tape (*i.e.*, without any other supporting structure) using only the foamed polymer of the '748 Patent. Accordingly, the combination of the references as suggested by Mr. Baxter is improper.

266. Mr. Baxter further contends that the '866 Patent describes the configurable pair separator including a substantially flat dielectric tape formed of a foamed polymer. In particular, Mr. Baxter alleges that the '095 Patent-In-Suit “expressly states that the pair separator in Figure 6 of the patent is substantially flat.” (Baxter, ¶ 244, p. 169). In my opinion, Mr. Baxter is incorrect in this regard.

267. Mr. Baxter has incorrectly concluded that “a flat configurable tape used as a core filler, that is shaped to have the illustrated profile” is equivalent to “the configurable pair separator being substantially flat.” The '095 Patent-In-Suit describes a tape that is initially flat, but later shaped to have the illustrated core profile when inserted into the core and performing the intended purpose of pair separation. After being shaped, as judged from an inspection of FIGURE 6, the pair separator is not flat. Rather, it has a cruciform shape in cross section, defining four quadrants. The claim, however, recites that the configurable dielectric pair separator include[es] a substantially flat dielectric tape. This could only mean that the

configurable pair separator is flat when introduced into the cable, as illustrated in FIGURES 4 and 5. Accordingly, the '866 Patent fails to anticipate claim 31 at least because the '866 Patent fails to disclose a “configurable dielectric pair separator being substantially flat.”

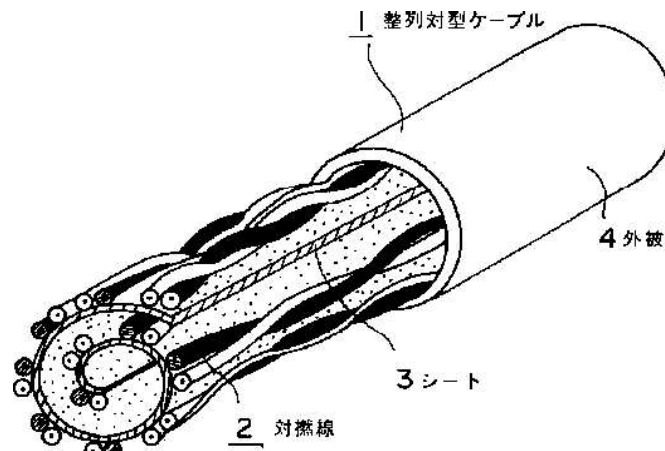
268. Finally, I also conclude that Mr. Baxter's opinion that a combination of the '866 and '748 Patents or other unspecified prior art would render Claim 31 obvious is incorrect because it is completely incompatible with the secondary considerations of non-obviousness that are present on the record in this case. I have already discussed these considerations above at paragraphs 255 to 261, and I expressly incorporate that discussion again by reference herein.

D. Claim 27 Is Not Anticipated By The '645 Patent

269. Mr. Baxter opines that Claim 27 of the '095 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §102 because it is allegedly anticipated by Japanese Patent JP 05-290645A (the “'645 Patent”). See (Baxter Rep. at ¶ 250 & Exh. 55). I disagree with this opinion because the '645 Patent fails to disclose either expressly or inherently each and every limitation recited in Claim 27. For example, as discussed in greater detail below, the '645 Patent fails to disclose at least the **“configurable dielectric pair separator being substantially flat”** limitation recited in claim element 27(c), as well as the limitation recited in claim element 27(e) that the **“first twisted pair of insulated conductors and the second twisted pair of insulated conductors are twisted about a common central axis to form a twisted pair cable.”**

270. First, Mr. Baxter has failed to show that the '645 Patent discloses the **“configurable dielectric pair separator being substantially flat”** that is required by claim element 27(c). In this regard, Mr. Baxter argues that the '645 Patent discloses a configurable dielectric separator disposed between at least two of the plurality of twisted pairs of insulated conductors, and that

the configurable dielectric pair separator includes a substantially flat dielectric tape. Moreover, Mr. Baxter describes the separator as “coiled or folded.” I have reviewed the English translation of the ‘645 Patent provided in the Baxter Report and observed that the ‘645 Patent describes several paired/stranded cable 2, fused/adhered to a sheet 3 through an adhesive, wound into a coil-like shape, and clad with a casing 4. (‘645 Patent, p. 1). Mr. Baxter contends that the sheet 3 corresponds to a configurable dielectric pair separator.



271. The ‘645 Patent describes the sheet 3, after having the paired/stranded cable fused/adhered to it, as being wound into a coil-like shape. The Baxter Report characterizes the ‘645 Patent as disclosing a separator that is coiled, or folded. (Baxter Rep. at ¶ 250, p. 173).

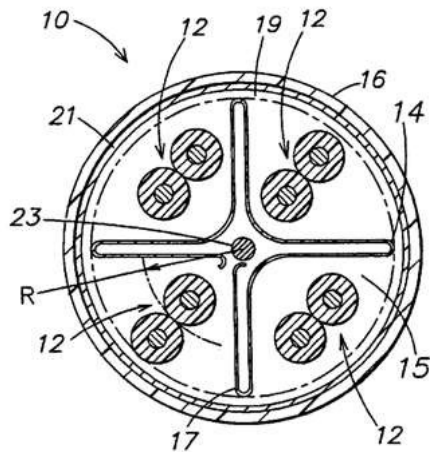
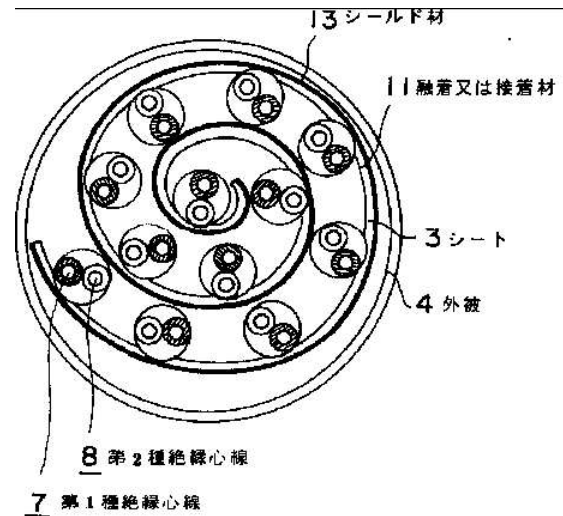


FIG. 6



272. Mr. Baxter also argues that the ‘645 Patent “discloses ‘substantially flat’ pair separators.” In this regard, Mr. Baxter asserts that the ‘095 Patent-In-Suit defines the pair separator of FIG. 6 of the patent as “flat,” quoting the ‘095 Patent-In-Suit at col. 6, ll. 12-15 (“In the embodiment of the cable of FIGURE 6, the pair separator 14 is a flat configurable tape used as a core filler, that is shaped to have the illustrated profile ...”). (Baxter Rep. at ¶ 250, p. 174). But Mr. Baxter has once again incorrectly interpreted that “a flat configurable tape *used* as a core filler” is equivalent to “the configurable pair separator being substantially flat.” What Mr. Baxter apparently fails to recognize is that the configurable pair separator, as in FIGURE 6, is *shaped* to have the illustrated profile. Thus, the configurable tape is initially flat, then shaped into a profile. The configurable tape is not a pair separator until it has been shaped to have the illustrated core profile to separate the twisted pair. After being shaped, as judged from an inspection of FIG. 6, the pair separator is certainly *not* flat. Rather, it has a cruciform shape in cross section, separating the twisted pair into four quadrants.

273. Likewise, although the sheet 3 of the ‘645 Patent may be initially flat, the ‘645 Patent describes and illustrates that the sheet 3 is coiled or folded. Mr. Baxter claims that it is this

coiling or folding that provides a plurality of grooves for the twisted pairs. (Baxter Rep. at ¶ 250, p. 175). It is my opinion that the ‘645 Patent fails to anticipate claim 27 at least because the configurable dielectric pair separator is not substantially flat.

274. Additionally, claim element 27(e) recites that **“the first twisted pair of insulated conductors and the second twisted pair of insulated conductors are twisted about a common central axis to form a twisted pair cable.”** It is my understanding that twisting of the first and second twisted pair of insulated conductors about a common axis would be akin to twisting together the individual conductors of either the first or second twisted pairs. Thus, the first and second twisted pairs are twisted around the common central axis in a helical manner.

275. The ‘645 Patent describes coiling or folding the sheet 3 as illustrated in the cross section above. I have reviewed the ‘645 Patent and found nothing to suggest that the individual paired/stranded cables 2 are twisted together. Rather, the ‘645 Patent illustrates the paired/stranded cables 2 being aligned parallel to each other, placed onto the sheet 3 in parallel alignment, then coiled. Coiling the sheet 3 is distinguishable from twisting the paired/stranded cables 2 about a common axis. Twisting suggest the helical arrangement of paired/stranded cables 2 along the length of the cable; whereas, coiling suggests that a planar arrangement of paired/stranded cables 2 is coiled in a “jelly roll” arrangement along a common axis.

276. When coiled, there is nothing in the ‘645 Patent to suggest that the individual paired/stranded cables 2 would be twisted about a common axis. More likely, they would remain in the parallel arrangement shown, with each aligned with the common axis, but not twisted about it. Furthermore, it is not apparent from the ‘645 disclosure that the individual paired/stranded cables 2 could be twisted about a common axis once placed upon the sheet and

coiled into the “jelly roll” configuration. Accordingly, it is my opinion that the ‘645 Patent also fails to anticipate claim 27 at least because the first and second twisted pairs of the ‘645 Patent are not twisted about a common central axis as required by claim element 27(e).

E. Claim 31 Is Not Obvious Over A Combination Of The ‘645 And ‘748 Patents

277. Mr. Baxter opines that Claim 31 of the ‘095 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of the ‘645 and ‘748 Patents. See (Baxter Rep. at ¶ 251). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 31 of the ‘095 Patent-In-Suit. Moreover, it is my further contrary conclusion that even if such a reason had existed, the combined elements of these two prior art references would not yield the subject matter as a whole recited in Claim 31 of the ‘095 Patent-In-Suit.

278. Mr. Baxter fails to identify any credible apparent reason why a person of ordinary skill in the art at the time of the invention would have been prompted to combine the disclosures of the ‘645 and ‘748 Patents. The ‘748 Patent describes flame retardant and smoke suppressant electrical insulation composition for an electrical conductor. The ‘748 Patent describes a foamed polymeric inner layer 14 surrounding the central conductor 12, with an outer layer 16 comprising a halogenated polymeric material and a smoke suppressant additive surrounding the inner layer 14 (col. 5, ll. 26-29), or as a jacketing material over paired conductors (col. 6, l. 41). Thus, the foamed polymer material is always described as being laid down upon another structure, such as the central conductor, or the cable. Neither the ‘645 Patent nor ‘748 Patents, nor any other

source identified by Mr. Baxter, suggest that one of ordinary skill in the art would know how to form a substantially flat dielectric tape formed of a foamed polymer as recited in the claim. The reference describes forming it as an insulation or jacketing about or upon some other structure. There would be no likelihood of success in forming the flat dielectric tape (*i.e.*, without any other supporting structure) using only the foamed polymer of the '748 Patent. Accordingly, combining references as suggested by Mr. Baxter is improper.

279. Even if Mr. Baxter were to establish an apparent reason to combine (which he has not), the combined elements of the '645 and '748 Patents would not satisfy all the claim limitations of Claim 31. For the same reasons described above in reference to Claim 27, the '645 Patent fails to at least describe, teach or suggest "a configurable dielectric pair separator including a substantially flat dielectric tape" as recited in Claim 31. Rather, the dielectric pair separator (*i.e.*, sheet 3) is coiled or folded to provide a plurality of grooves for the twisted pairs. Once coiled or folded, the sheet is no longer flat. The '748 Patent fails to cure the deficiencies of the '645 Patent. Accordingly, even if the references are combined as suggested by Mr. Baxter, the combination fails to describe, teach, or suggest "a configurable dielectric pair separator including a substantially flat dielectric tape."

280. Claim 31 recites that "the plurality of twisted pairs of insulated conductors and the configurable dielectric pair separator are *twisted* about a common axis to form a twisted pair cable." Even if these two references were combined as called for by Mr. Baxter, the combination fail to describe such an arrangement being twisted about a common axis to form a twisted pair cable. Rather, the paired/stranded cables 2 are coiled about a common axis, with nothing to suggest that the paired/stranded cables 2 form any sort of helical arrangement along the length of the cable. Accordingly, it is my opinion that the '645 Patent also fails to anticipate

Claim 31 at least because the first and second twisted pairs of the '645 Patent are not twisted about a common central axis.

281. In addition, I also conclude that Mr. Baxter's opinion that a combination of the '645 and '748 Patents would render Claim 31 obvious is incorrect because it is completely incompatible with the secondary considerations of non-obviousness that are present on the record in this case. I have already discussed these considerations above at paragraphs 255 to 261, and I expressly incorporate that discussion again by reference herein.

282. Finally, Mr. Baxter alleges that Claims 27 and 31 are allegedly invalid in view of the September 10, 2009 office action from the Patent Office in connection with the pending reexamination of the '095 Patent-In-Suit (Exhibit 54). (Baxter Rep. at ¶ 246, ¶ 252). Pursuant to my understanding of the law as presented above, this argument does not merit a response because non-final decisions made by the Examiner in reexamination proceedings are of little or no value evidentiary relevance in a co-pending litigation, and are viewed by the courts as more prejudicial than probative on the issue of patent validity.

XIV. THE '537 PATENT-IN-SUIT

A. Claim 19 Is Not Obvious Over A Combination Of The '866 And '748 Patents

283. Mr. Baxter opines that Claim 19 of the '537 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of the '866 and '748 Patents. See (Baxter Rep. at ¶ 259 & Exhs. 50, 53). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 19 of the

‘537 Patent-In-Suit. Moreover, it is my further contrary conclusion that even if such a reason had existed, the combined elements of these two prior art references would not yield the subject matter as a whole recited in Claim 19 of the ‘537 Patent-In-Suit.

284. As an initial matter, the Baxter Report alleges that the ‘866 Patent “was *not* cumulative with art that was in front of the Patent Office.” (Mr. Baxter Rep. at ¶ 259, p. 180). I disagree because to the extent that it is relevant the ‘866 Patent contains information that was already before the Examiner. I have observed from the file history of the ‘537 Patent-In-Suit that a first office action was mailed from the Patent Office on March 3, 2004. In that action, the Examiner rejected claims 1-11 and 14-17 under 35 U.S.C. § 103(a) as being unpatentable over the combination of U.S. Pat. No. 5,969,295 to Boucino et al. (the “Boucino Patent”) and U.S. Pat. No. 3,911,200 to Simons et al. (the “Simons Patent”), either alone or in combination with other references. The Boucino Patent describes a “cross-web” type separator and the Simons Patent describes laminated metal foils. In the rejection, the Examiner relied upon the Simons Patent to cure the deficiency of the Boucino Patent by providing a separator consisting of a dielectric layer and a conductive layer folded and arranged to provide a plurality of grooves. Thus, the ‘866 Patent is cumulative of Simons et al. reference, because it also recites separator consisting of a dielectric layer and a conductive layer (*i.e.*, partial shields consisting of “aluminum foils laminated by plastic”).

285. Claim 21 (issued claim 19), was added by amendment in a response to a first office action, mailed on May 14, 2004. Claim 21 was rejected in a final office action mailed on June 17, 2004, in which the Examiner alleged that it would have been obvious to use the separator as taught by the Simon Patent for the separator of Boucino, “since the separator of Simons not only

separates the pairs, but also provides a shielding for the pairs.” (Final action, mailed on June 17, 2004, p. 3, ll. 8-9).

286. In a reply to the final office action, mailed on September 17, 2004, the Applicants amended claim 21, as set forth below, to clarify that it is directed to an “unshielded cable” and to add that the dielectric separator “consists of *non-conductive*, dielectric materials. Claim 21 was subsequently allowed.

21. (currently amended) A An unshielded communications cable comprising:
a plurality of twisted pairs of insulated conductors comprising a first twisted pair of insulated conductors and a second twisted pair of insulated conductors;
a substantially flat configurable dielectric separator that consists of non-conductive, dielectric materials disposed between the plurality of twisted pairs of conductors that separates the first twisted pair of insulated conductors from the second twisted pair of insulated conductors; and
a jacket enclosing the plurality of twisted pairs of insulated conductors and the configurable dielectric separator;
wherein the substantially flat configurable dielectric separator includes a foamed polymer.

287. The claim as amended was allowed in view of the combination of Boucino and Simons. There is no reason to change that finding, since the laminated metal foils disclosed in the ‘866 Patent are not materially different from those disclosed in the Simons Patent. In other words, the ‘866 Patent is merely cumulative to the art disclosing conductive shielding foils that has already been considered by the Examiner, because the Simons Patent discloses similar laminated metal foil shielding tapes.

288. Pursuant to my understanding of the law as presented above, given that the ‘866 Patent is merely cumulative of art that was already before the Examiner, Mr. Baxter must meet a burden

of proof on invalidity even heavier than the usual clear and convincing evidence standard. In my view, for at least the reasons that follow, Mr. Baxter is unable to meet this heightened burden.

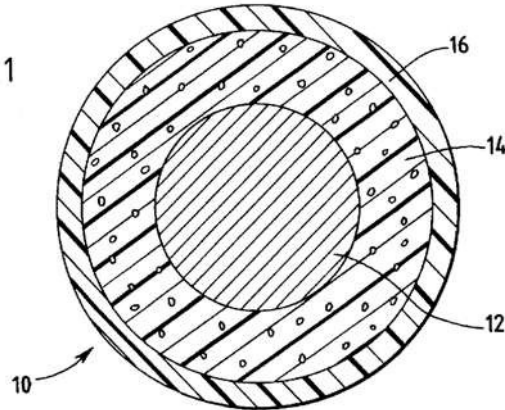
289. First, Mr. Baxter is unable to show that the combined elements of the ‘866 and ‘748 Patents would meet the “**configurable dielectric separator**” limitation required by claim elements 19(b) – (d). I have reviewed the English translation of the ‘866 Patent provided as exhibit 50 to the Baxter Report and observed that the ‘866 Patent refers to a “shield” and not a configurable dielectric separator that consists of *non-conductive*, dielectric materials, as recited in claim 19. See, e.g., (‘866 Patent, Eng. transl., p. 1, ll. 4-6). A shield is fundamentally and structurally different from a dielectric separator that consists of non-conductive, dielectric materials, because a shield necessarily includes an electrically conductive component. The ‘866 Patent is quite consistent in this regard, describing the shield as “preferably consisting of metal foils, especially aluminum foils or aluminum foils laminated by plastic” (‘866 Patent, Eng. transl. p. 5, ll. 9-11). Metal foils, such as those described in the ‘866 Patent are known to be good conductors of electricity, and for at least that reason would not be considered non-conductive in any sense. Even an aluminum foil laminated by a plastic represents a shield and not a dielectric, because it includes an electrically conductive layer of aluminum foil.

290. With respect to motivation to combine, one of ordinary skill in the art would not combine the references as suggested: in the interest of trying a plastic separator because of potential cost savings, nor would there be any reasonable expectation of success if one were to do so. (Baxter Rep. at ¶ 260, p. 184). Mr. Baxter also argues that one of ordinary skill in the art would have known to combine the teachings of foamed polymer disclosed in the ‘748 Patent to modify the pair separator of the ‘866 Patent, to achieve a pair separator with non-conductive, dielectric materials only. (Baxter Rep. at ¶ 259, p. 183).

291. I have been informed that when a proposed modification would render a prior art invention being modified unsatisfactory for its intended purpose, then there is no apparent reason, suggestion, or motivation to make the proposed modification. (MPEP § 2143.01 (V), citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). It is my opinion that modification of the '866 Patent to remove the metal foil from the pair separator, whether combined with the foamed polymer (a non-conducting material) of the '748 Patent or not, would remove any expectation that the resulting structure would provide any shielding. In other words, combination of the references that Mr. Baxter has suggested would render the shield of the '866 Patent unfit for its intended purpose. For at least this reason, a person of ordinary skill in the art at the time of the invention would not have been prompted to combine these two references in the manner advocated by Mr. Baxter. Thus, Claim 19 is not obvious in view of the combination because the combination is improper.

292. Moreover, there would likewise be no apparent reason to modify the electrical insulation of the '748 Patent into a substantially flat dielectric pair separator, because there would be no underlying conductor. The '748 Patent describes flame retardant and smoke suppressant electrical insulation composition for an electrical conductor. The '748 Patent describes a foamed polymeric inner layer 14 surrounding the central conductor 12, with an outer layer 16 comprising a halogenated polymeric material and a smoke suppressant additive surrounding the inner layer 14 (col. 5, ll. 26-29), or as a jacketing material over paired conductors (col. 6, l. 41).

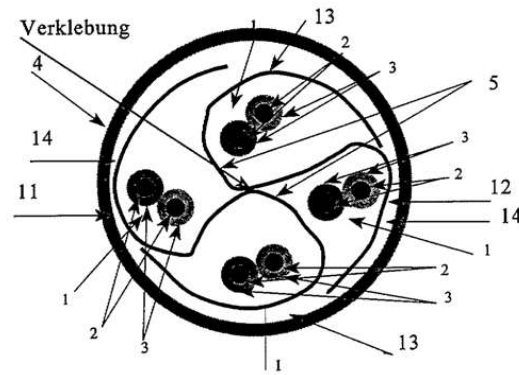
FIG. 1



293. Thus, the foamed polymer material is always described as being laid down upon another structure, such as the central conductor, or the cable. Neither the ‘866 nor ‘748 Patents, nor any other source identified by Mr. Baxter, suggest that one of ordinary skill in the art would know how to prepare a substantially flat dielectric tape formed of a foamed polymer as recited in the claim. The reference describes forming it as an insulation or jacketing about or upon some other structure. There would be no likelihood of success in forming the flat dielectric tape (*i.e.*, without any other supporting structure) using only the foamed polymer of the ‘748 Patent. Mr. Baxter contends that the level of skill in the art for the ‘537 Patent-In-Suit would be “a Bachelor of Science in Mechanical or Electrical Engineering and five to seven years of industry experience (or equivalent such as a masters degree with less experience).” (Baxter Rep. at ¶ 39). There is nothing to suggest a mechanical or electrical engineer would have the skills to reformulate the insulation of the ‘748 Patent into a flat unsupported configurable tape. Such a modification would appear to be beyond what would normally be encountered during cable development. Accordingly, combination of the references as suggested by Mr. Baxter is improper for this reason as well.

294. Second, Mr. Baxter is unable to show that the combined elements of the ‘866 and ‘748 Patents would result in the “**substantially flat**” configurable dielectric separator of the type

required by claim element 19(b). The Baxter Report alleges that the '866 Patent describes the configurable pair separator including two substantially flat configurable pair separators, referring to item 5 in FIG. 3 of the '866 Patent provided below.



Figur 3

295. Thus Mr. Baxter appears to have incorrectly interpreted that a flat configurable tape used as a core filler, particularly one that may be shaped as in the pair separators 5 shown above (*i.e.*, no longer flat), is equivalent to a “substantially flat dielectric separator.” Although the tape described in the '866 Patent may be flat and configurable, it is not flat when disposed in the cable and serving as the pair separator. The comparison should be made when the tape is in the cable, since that is what the claim recites. The '748 Patent fails to cure this deficiency. Accordingly, even if the '866 Patent and the '748 Patents are combined as suggested, their combination fails to render obvious claim 19 at least because the combined references fail to disclose a “substantially flat dielectric separator.”

296. In addition, I also conclude that Mr. Baxter’s opinion that a combination of the '866 and '748 Patents would render Claim 19 obvious is incorrect because it is incompatible with the secondary considerations of non-obviousness that are present on the record in this case. These secondary considerations are described in greater detail below, and also in Belden’s

supplemental responses to Superior Essex's Interrogatory No. 6 served on September 22, 2009 which are expressly incorporated by reference herein.

297. The commercial success of the '537 inventions is evidenced by the fact that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

298. Indeed, the success of embodying products, whether sold by Belden or by another, is in part due to a long felt and persistent need in the market that the patented inventions satisfied. In particular, the patented inventions enabled Belden to market high-speed data cables that performed at or above standards promulgated by the Telecommunications Industry Association (the "TIA") in conjunction with the Electronics Industry Association (the TIA/EIA"). (Niemiera Dep. 112:1-10.) In the high-speed data cable industry, performance above an industry specification is termed "headroom." Specifically, proposed revisions to the TIA/EIA-568-A standard, known as "Category 6," required telecommunications cables to have in excess of 40 dB of crosstalk isolation between the twisted pairs of conductors at 100 MHz.

299. At the time of invention, the preferred approach for meeting the higher data transmission rate requirements while achieving levels of crosstalk isolation dictated by evolving industry standards was to employ a centrally located pre-shaped support within the cable, typically in the shape of an "+", which provided geometric separation among the twisted pairs.

However, cables that included a “+” shaped separator (hereinafter a “cross-web” separator) were relatively rigid and more expensive to make due to increased material costs.

300. Other attempts were made at address the problem of crosstalk utilizing flat cable configurations, elongated fins protruding inward from the cable jacket, and rod fillers disposed between the conductor pairs. Each of these approaches presented various disadvantages including manufacturing difficulties, inconsistent performance and commercial infeasibility. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

301. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

302. In addition, each of the embodied inventions produced unexpected results given previously high levels of industry skepticism. Members of the high-speed data cable industry were particularly skeptical of the embodied inventions' merits and whether they would allow a cable to achieve comparable electrical performance to a cable with a cross-web separator. Although the test results were met with industry surprise, using the embodied inventions, the Belden entities demonstrated that enhanced Category 6 performance was achievable using a tape separator.

B. Claim 19 Is Not Obvious Over A Combination Of The '485 And '748 Patents

303. Mr. Baxter opines that Claim 19 of the '537 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of prior art U.S. Patent No. 4,385,485 (the "'485 Patent") and the '748 Patent. See (Baxter Rep. at ¶ 263 & Exhs. 17, 53). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 19 of the '537 Patent-In-Suit. Moreover, it is my further contrary conclusion that even if such a reason had existed, the combined elements of these two prior art references would not yield the subject matter as a whole recited in Claim 19 of the '537 Patent-In-Suit.

304. By way of background, the '485 Patent describes various cable constructions in which the optical fibers are disposed within the cable in a loosely-fitting fashion. The '485 Patent illustrates and describes that "a plurality of optical fibers 10 are accommodated in the recesses provided in a plurality of V-shaped folded splicing tapes 11." As described in the '485 Patent,

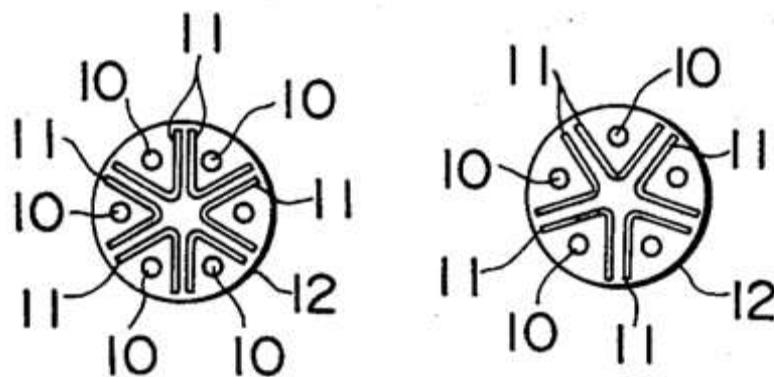
the loose fitting of the optical fibers overcomes undesirable effects caused by “lateral or compression forces inherently applied to the optical fibers of conventional optical fiber cable constructions.” (‘486 Patent, Col. 2, ll. 28 – 30). Thus, tapes are provided in the ‘485 Patent to control mechanical forces acting on optical fibers, not for electrical performance.

305. Mr. Baxter fails to identify any credible apparent reasons why a person of ordinary skill in the art at the time of the invention would have been prompted to combine the disclosures of the ‘485 and ‘748 Patents so as to substitute twisted pairs in place of the optical fibers of the ‘485 Patent. In this regard, Mr. Baxter points to the disclosure of the ‘537 Patent-In-Suit, indicating that high-speed data communication media can be used instead of twisted pairs of conductors. Considering language in the ‘537 Patent-In-Suit relied upon by Mr. Baxter, it would be possible to substitute the twisted pair of the ‘537 Patent-In-Suit with fiber optic media (twisted pair to fiber). Mr. Baxter suggests that this also provides motivation in the opposite sense for replacing optical fibers of the ‘485 Patent with twisted pair. I do not find this suggestion at all persuasive. Motivation for replacing twisted pairs with optical fibers (*e.g.*, for increased bandwidth) does not suggest any motivation for the opposite - replacing optical fibers with twisted pairs as Mr. Baxter has suggested.

306. I have been informed that when a proposed modification would render a prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or apparent reason to make the proposed modification. Optical fiber is generally considered an improvement over twisted pairs of insulated conductors as fiber offers advantages not attainable with insulated conductors. One well recognized advantage would be the greater bandwidth of optical fibers compared to individual twisted pair. For example, a single optical fiber can replace many such twisted pairs of insulated conductors. Such improvements provide motivation for

replacing twisted pairs with fiber as suggested in the '537 Patent-In-Suit. However, replacement of fiber with twisted pair would not be obvious as it would sacrifice advantages offered by the fiber for no apparent reason. Accordingly, there would be no motivation to replace the optical fibers with twisted pairs as Mr. Baxter has opined.

307. Even if the '485 Patent was modified and combined with the '748 Patent in the manner advocated by Mr. Baxter, the resulting structure would still fail to include all of the limitations recited in Claim 19. As shown and described in the '485 Patent, the splicing tapes 11 are folded into the V-shapes in the longitudinal direction to loosely accommodate the optical fibers. Each fiber is provided in its respective folded splicing tape.



308. Assuming for the sake of argument that it were obvious to replace the optical fibers of the '485 Patent with twisted pair, the configurable dielectric separator (the tape 11) would not be substantially flat when disposed between the plurality of twisted pairs of conductors as required by claim elements 19(b) – (d). There is nothing in the '485 Patent to suggest that any of the splicing tape is introduced into a finished cable without first being folded in some manner. It is the folds that provide the loose fitting channel to accommodate the fiber. There is nothing in the '748 Patent to cure this deficiency. Accordingly, even if the references were combined, the

combination would still fail to render claim 19 obvious, because the resulting cable would not include “a substantially flat configurable dielectric separator.” Although a flat tape may be folded to create a dielectric separator” (e.g., V-slot), the folded tape would no longer be flat and therefore could not be a flat pair separator. In other words, the tape is not a pair separator until it is placed in between twisted pair, and this would not occur in a modified ‘485 configuration until after the twisted tape has been folded.

309. Moreover, the ‘748 Patent describes a foamed polymeric inner layer 14 surrounding a central conductor 12, with an outer layer 16 comprising a halogenated polymeric material and a smoke suppressant additive surrounding the inner layer 14 (col. 5, ll. 26-29), or as a jacketing material over paired conductors (col. 6, l. 41). The foamed polymer material is always described as being laid down upon another structure, such as the central conductor, or the cable. Neither ‘485 and ‘748 Patents, nor any other source identified by Mr. Baxter, suggest that one of ordinary skill in the art would know how to form a substantially flat configurable dielectric separator using a foamed polymer as recited in the claim. The reference describes forming the fire resistant material as an insulation or jacketing about or upon some other structure. There would be no likelihood of success in forming the flat dielectric tape (*i.e.*, without any other supporting structure) using only the foamed polymer of the ‘748 Patent. Accordingly, combination of the references as suggested by Mr. Baxter is improper.

310. Finally, I also conclude that Mr. Baxter’s opinion that a combination of the ‘485 and ‘748 Patents would render Claim 19 obvious is incorrect because it is completely incompatible with the secondary considerations of non-obviousness that are present on the record in this case. I have already discussed these considerations above at paragraphs 297 to 302, and I expressly incorporate that discussion again by reference herein.

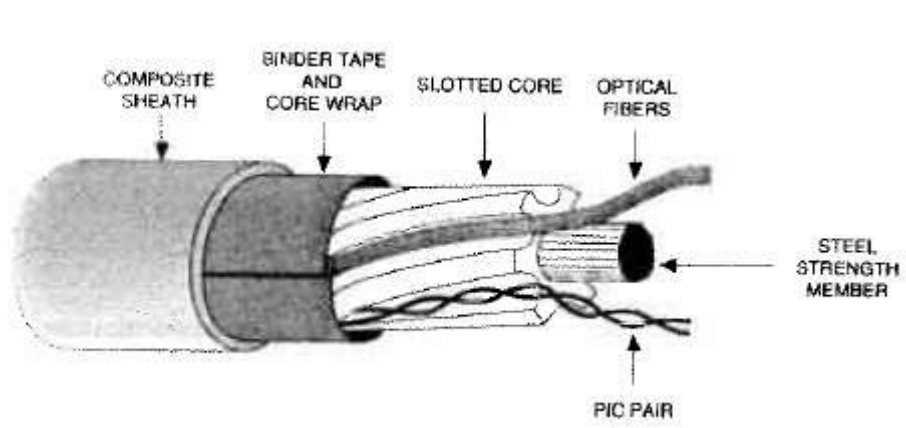
C. Claim 19 Is Not Obvious Over A Combination Of The ‘485 And ‘748 Patents And The Refi Reference

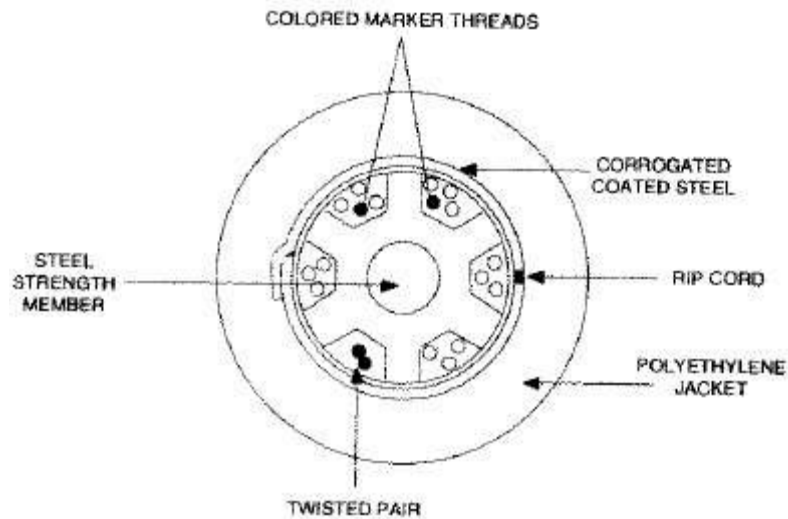
311. Mr. Baxter opines that Claim 19 of the ‘537 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of the ‘485 and ‘748 Patents with a publication authored by James J. Refi entitled “Fiber Optic Cable: A Lightguide” (1991) (the “Refi Reference”) See (Baxter Rep. at ¶ 263 & Exhs. 17, 44, 53). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 19 of the ‘537 Patent-In-Suit. Moreover, it is my further contrary conclusion that even if such a reason had existed, the combined elements of these two prior art references would not yield the subject matter as a whole recited in Claim 19 of the ‘537 Patent-In-Suit.

312. The Refi reference describes that “loose tube hybrid cables can be made by substituting twisted copper pairs for fiber tubes.” In general, the cable structure described in the Refi reference is substantially different from twisted pair cable. First, the cable includes a strength member, that may be a central member, or external to the cable. Such strength members are included to reduce the application of any tensile forces to the fibers themselves. Additionally, the fibers are housed loosely within tubes, referred to as buffer jackets. Open space within the cable is typically filled with a gel like substance, referred to as an interstitial filling.

313. The Refi reference describes forming the hybrid cable by “substituting copper pairs for the fibers in a *slot*.” An example of a hybrid cable is illustrated in FIG. 6, a “Northern Telecom hybrid 15-fiber/*one twisted copper pair* slotted core cable.” There is nothing by way of

disclosure in the Refi reference to teach the alleged “effectiveness” of such a substitution as suggested by Mr. Baxter. (Baxter Rep. ¶ 264). In my opinion, the Refi reference describes an optical fiber cable configured as a hybrid cable that can have at most one twisted pair. The only example provided in the Refi reference is the “15-fiber/one twisted copper pair slotted core cable” shown below. As described and shown in the Refi reference, the cable includes only one twisted pair. To the extent the Refi reference describes having more than one twisted copper pair, they would only be provide within “a slot,” meaning a single slot of the cable’s slotted core. This is understandable, given that the cable includes such a specialized configuration to accommodate optical fibers, recognizing that optical fibers offer substantial advantages over copper pair. Thus, there would be no apparent motivation to occupy any more slots than absolutely necessary with copper pair, and that is plainly described as one slot.





314. Claim 19 is not obvious over a combination of the ‘485 and ‘748 Patents for reasons set forth above. Further combination with the Refi reference might result in - at most - a single twisted pair substituted for fiber in optical fibers described in either the ‘503 Patent-In-Suit or the Refi reference. Such a combination would not render Claim 19 obvious, because claim elements 19(a) – (c) recite an unshielded communications cable comprising a *plurality* of twisted pairs of insulated conductors. At best, the combination teaches one twisted pair, not a plurality of twisted pairs, and one of ordinary skill in the art would not be motivated to replace any more of the optical fibers with additional twisted pairs, as such a substitution would dramatically reduce bandwidth capacity of the cable.

315. Even if one were to argue that the Refi reference supports more than one twisted pair, such a plurality of twisted pairs would necessarily be confined to a single slot of the slotted core. Thus, the plurality of twisted pairs confined to a single slot of the slotted core cable of the Refi reference, or within one of the folded tapes of the ‘485 Patent. Claim element 19(b) requires that the “substantially flat configurable dielectric separator ... is disposed between the plurality of twisted pairs of conductors that separates the first twisted pair of insulated conductors from the

second twisted pair of insulated conductors.” Whether the dielectric separator is considered ridges of the slotted core of the Refi reference, or the folded splicing tapes of the ‘485 reference, neither would be disposed between the plurality of twisted pairs of conductors if they were all confined in a single slot, as required by Refi.

316. Finally, I also conclude that Mr. Baxter’s opinion that a combination of the ‘485 and ‘748 Patents with the Refi Reference would render Claim 19 obvious is incorrect because it is completely incompatible with the secondary considerations of non-obviousness that are present on the record in this case. I have already discussed these considerations above at paragraphs 297 to 302, and I expressly incorporate that discussion again by reference herein

D. Claim 19 Is Not Obvious Over A Combination Of The ‘629 Patent and Other Prior Art

317. Mr. Baxter opines that Claim 19 of the ‘537 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of prior art U.S. Patent Nos. 4,755,629 (the “‘629 Patent”) with other unspecified prior art. See (Baxter Rep. at ¶ 267). I have reviewed the Baxter Report and despite the this allegation, see nothing further suggesting that the ‘629 Patent can be combined with any other prior art, or any support for why it would be obvious to do so. Accordingly, I am unable to respond to this allegation without being provided with further detail, but I expressly reserve the right to so respond in the future if such detail is provided.

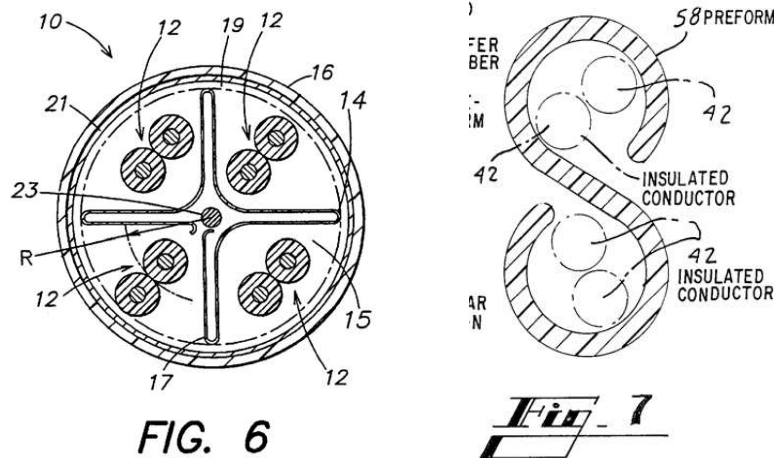
E. Claim 19 Is Not Anticipated By The ‘629 Patent

318. Mr. Baxter may be opining that Claim 19 of the ‘537 Patent-In-Suit is invalid within the meaning of U.S.C. §102 because it is allegedly anticipated by the ‘629 Patent. See (Baxter Rep.

at ¶ 268 & Exh. 33). I disagree with this opinion because the '629 Patent fails to disclose either expressly or inherently each and every claim limitation recited in Claim 19. For example, as discussed in greater detail below, the '629 Patent fails to disclose at least the **“substantially flat configurable dielectric pair separator”** recited in claim elements 19(b) and (d), as well as the **“foamed polymer”** recited in claim element 19(d).

319. Claim elements 19(b) and (d) recite “a substantially flat configurable dielectric separator” that consists of non-conductive, dielectric materials disposed between the plurality of twisted pairs of conductors that separates the first twisted pair of insulated conductors from the second twisted pair of insulated conductors. I have reviewed the '629 Patent, which discloses a cable in which each pair of individually insulated conductors is enclosed individually in its own tubular member. A metallic shield encloses the tubular members. The '629 Patent also discloses that the tubular members can be replaced with an S-shaped “pre-form.” This “pre-form” is not a “substantially flat configurable dielectric pair separator.” The '629 Patent discloses that the pre-form may be replaced with “a tape which is made of a dielectric material and wrapped about the conductor pairs to cause each pair to be enclosed substantially in a dielectric portion of the buffer system.” See ('629 Patent, col. 6, ll. 52-56). (“Also, the S-shaped preform 58 in FIGURE 7 may be 190 replaced with a tape which is made of a dielectric material and which is wrapped about the conductor pairs to cause each pair to be enclosed substantially in a dielectric portion of the buffer system”). Despite this, there is nothing in the reference showing that the tape identified in this passage of the '629 Patent is a “substantially flat configurable dielectric pair separator.” The tape is described as being “wrapped about” the conductor. It would be impossible to accomplish such wrapping and still have a flat pair separator. Nor does the '629 Patent show that its “tape”

might include a “foamed polymer” as recited in claim element 19(d). For at least these reasons, claim 19 patentably distinguishes over the ’629 Patent.

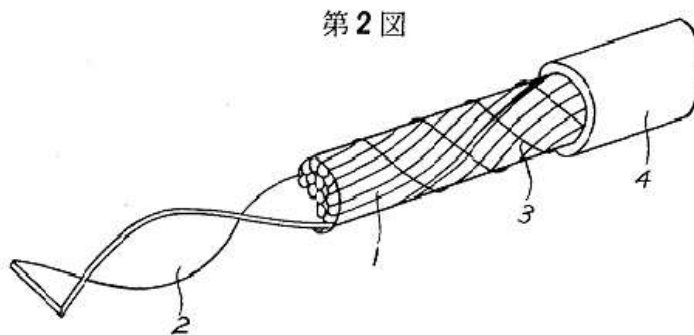


F. Claim 19 Is Not Obvious Over A Combination Of The ‘470 And ‘748 Patents

320. Mr. Baxter opines that Claim 19 of the ‘537 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of Japanese Patent No. Sho43(1968)-15470 (the “ ‘470 Patent”) and the ‘748 Patent. See (Baxter Rep. at ¶ 271 & Exh. 56). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 19 of the ‘537 Patent-In-Suit. Moreover, it is my further contrary conclusion that even if such a reason had existed, the combined elements of these two prior art references would not yield the subject matter as a whole recited in Claim 19 of the ‘537 Patent-In-Suit.

321. I have reviewed an English translation of the ‘470 Patent, which relates to an alternately stranded cable that prevents the unraveling of twisted wire within the cable. The ‘470 Patent

describes the problem for so-called alternately stranded cable that they become unraveled under a tensile force applied in the cable's longitudinal direction. To address this problem, the '470 Patent describes adding a core material 2 that is "formed into a reciprocatingly twisted state." In formation of the cable, wires are twisted together with the preformed twisted core, such that the wires within the cable do not become unraveled even when tensile force is applied in the longitudinal direction. The '470 Patent describes the plate body (the core) being preformed into the twisted state by "twisting the facing direction of the plate body...while maintaining the rigid plastic or other material of the horizontal plate at a prescribed temperature." ('470 Patent, Eng. transl., p. 1, ll. 22-24). As described, the plate body (*i.e.*, core) is a "rigid plastic" formed by twisting the plate body in a thermal process.



322. Claim element 19(b) recites "a substantially flat configurable dielectric separator that consists of non-conductive, dielectric materials disposed between the plurality of twisted pairs of conductors that separates the first twisted pair of insulated conductors from the second twisted pair of insulated conductors." Mr. Baxter acknowledges that the core material 2 is a rigid plastic that is preformed into a twisted shape during a thermal process. (Baxter Rep. at ¶ 272). It is precisely the rigidity, or non-configurability of the formed core material that is relied upon to keep the cable from becoming unraveled under tensile force applied along the cable's longitudinal direction.

323. None of Mr. Baxter's contentions are credible as to why there purportedly would have been an apparent reason for a person of ordinary skill in the art to have combined the materials of the '748 Patent with the separator of the '470 Patent to achieve the subject matter of Claim 19. (Baxter Rep. at ¶ 273). As described Mr. Baxter, the '748 Patent is related to the types of materials that are optimal to meet fire and electrical standards for copper twisted pair communication cables. Mr. Baxter does not provide any further guidance as to how one of ordinary skill in the art would actually go about achieving such a combination. Two variations come to mind. First, what Mr. Baxter may be suggesting is that the reciprocatingly twisted, rigid plastic core material 2 of the '470 Patent is combined with the materials described in the '748 Patent. Alternatively, Mr. Baxter may be suggesting replacement of the reciprocatingly twisted core material 2 of the '470 Patent with any of the materials described in the '748 Patent. Each possibility is addressed in turn below.

324. Combination of any of the material described in the '748 Patent with the core material of the '470 Patent could be achieved in some sort of a layered structure. By its intended use as cable insulation, I understand materials described in the '748 Patent to be flexible at room temperature. If they were not flexible (*i.e.*, rigid), they would hinder flexibility of insulated cables making them generally unfit for their intended purpose. In order to retain the desirable rigidity of the core described in the '470 Patent, it would seem reasonable that any layered combination would retain the rigid core material. I understand that such a combination would not be obvious to one skilled in the arts for at least several reasons.

325. First, keeping the core material of the '470 Patent in combination with any material described in the '748 Patent would simply represent an additional material being added to the cable. This would not remove the original core material, which presumably does not have the

desirable flammability and smoke resistance. It is not apparent that any advantages would be realized by way of flammability and smoke resistance when retaining all of the original core material within the cable. It is my understanding that as a general rule, less material in a cable is preferred for flammability and smoke resistance because it provides less fuel. Thus, one of ordinary skill in the art at the time of the invention would not have simply added any of the materials described in the '748 Patent to the original core material of the '470 Patent because doing so would not remove any of the original core material, but would simply add more material within the same cable. There is nothing to suggest that an expectation of success, as measured by improved flammability and/or smoke resistance associated with foamed polymers, would be realized if the original core material were not removed.

326. Additionally, the '537 Patent-In-Suit describes advantages to having less core separator material. ('537 Patent-In-Suit, col. 5, ll. 21-27). Although the dielectric separator consists of non-conductive, dielectric materials, it is well understood that such materials can affect electrical performance of communications cables, particularly when in close contact with the conductors. Thus, simply adding any additional material, such as those described in the '748 Patent, would represent more core separator material within the cable. It would not have been obvious for one of ordinary skill at the time of the invention to add more material to the cable as it would likely impact electrical performance parameters. The additional material and processing would also add cost and complexity to production of the same cable. Clearly, there would have been no motivation to combine the '748 Patent with the '470 Patent unless benefits were assured.

327. It may be that Mr. Baxter is suggesting replacement of the core material of the '470 Patent with the materials described in the '748 Patent. If so, there would be no likelihood of success in making such a substitution because the reciprocatingly twisted core would not be

rigid. The materials described in the '748 Patent are used as wire insulation, which would require flexibility at room temperature to allow installation and use of any such insulated wires. Replacing the rigid core material of the '470 Patent with flexible material of the '748 Patent would not prevent the cable from unraveling under tensile force applied along the cable's longitudinal direction --precisely the problem addressed by use of the rigid core in the '470 Patent. Accordingly, one of ordinary skill in the art would not have been motivated to make such a substitution, because it would defeat the intended purpose of the '470 Patent which was to prevent such unwinding of the cable.

328. Finally, I also conclude that Mr. Baxter's opinion that a combination of the '470 and '748 Patents or other unspecified prior art would render Claim 19 obvious is incorrect because it is completely incompatible with the secondary considerations of non-obviousness that are present on the record in this case. I have already discussed these considerations above at paragraphs 297 to 302, and I expressly incorporate that discussion again by reference herein.

XV. THE '999 PATENT-IN-SUIT

A. Claim 2 Is Not Anticipated By The '866 Patent

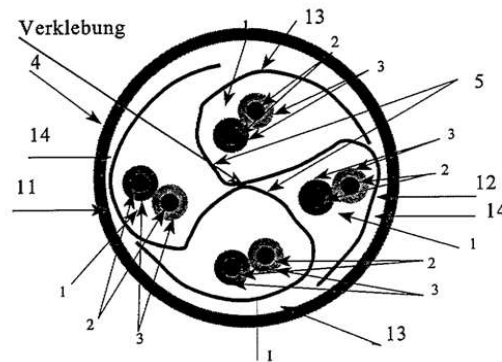
329. Mr. Baxter opines that Claim 2 of the '999 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §102 because it is allegedly anticipated by the '866 Patent. See (Baxter Rep. at ¶ 279 & Exh. 50). I disagree with this opinion because the '866 Patent fails to disclose either expressly or inherently each and every limitation recited in Claim 2. For example, as discussed in greater detail below, the '866 Patent fails to disclose at least the limitation of incorporated claim element 1(d) **"wherein the plurality of twisted pairs of insulated conductors and the configurable tape separator are cabled about a common axis to form the unshielded twisted pair**

communications cable.” Moreover, it also fails to disclose the limitation of incorporated claim element 1(d) **“wherein the configurable tape separator is substantially non-conductive.”**

330. As an initial matter, Mr. Baxter argues that the ‘866 Patent was not cumulative to the art that was in front of the Patent Office during prosecution of the application that matured into U.S. Patent No. 7,179,999 (the ‘999 Patent-In-Suit). (Baxter Rep. at ¶ 279, p. 200). I disagree because to the extent that it is relevant at all the ‘866 Patent contains information that was already before the Examiner. I have reviewed the prosecution history of the ‘999 Patent-In-Suit and its parent, U.S. Patent No. 6,998,537 (the ‘537 Patent-In-Suit). I observed that the shielding foils of the ‘866 Patent are similar to those disclosed in U.S. Patent No. 3,911,200 to Simons et al. (the “Simons Patent”), and in DE 90 11 484 (the “‘484 Patent”), both of record and used by the Examiner in the ‘999 Patent-In-Suit and in its parent application, now ‘537 Patent-In-Suit. During prosecution of the ‘999 and ‘537 Patent-In-Suits, the Examiner agreed with the position that the laminated metal foils disclosed in the Simons Patent and in the ‘484 Patent are not non-conductive. There is no reason to change that position now, nor to consider that the laminated metal foils disclosed in the ‘866 Patent are different from those disclosed in the Simons Patent and the ‘484 Patent. Thus, the ‘866 Patent is merely cumulative to the art disclosing conductive shielding foils that has already been considered by the Examiner because the Simons Patent and the ‘484 Patent disclose similar laminated metal foil shielding tapes.

331. Pursuant to my understanding of the law as presented above, given that the ‘866 Patent is merely cumulative of art that was before the Examiner, Mr. Baxter must meet a burden of proof on invalidity even heavier than the usual clear and convincing evidence standard. In my view, for at least the reasons that follow, Mr. Baxter is unable to meet this heightened burden.

332. By way of background, the ‘866 Patent states that “the invention is based on the fundamental idea that by means of the shielding, the cable cross-section is subdivided into sectors in which the conductor pairs are shielded against each other and essentially externally.” See (translation of the ‘866 Patent at ¶ 2, p. 2). According to the ‘866 Patent, the shielding “preferably consists of metal foils, especially aluminum foils or aluminum foils laminated by plastic.” See (translation of the ‘866 Patent at ¶ 2, p. 5). Reference is also made to Figure 3 of the ‘866 Patent, reproduced below.



Figur 3

333. In my opinion the ‘866 Patent is non-anticipatory because it fails to disclose the limitation of claim element 1(d) “**wherein the plurality of twisted pairs of insulated conductors and the configurable tape separator are cabled about a common axis to form the unshielded twisted pair communications cable.**” Because Claim 2 is dependent from Claim 1, this limitation is contained in Claim 2 as well. Mr. Baxter alleges that the ‘866 Patent discloses stranding the cable, such as SZ stranding. I have reviewed the ‘866 Patent and disagree with Mr. Baxter’s conclusion that the ‘866 Patent discloses this limitation. (Baxter Rep. at ¶ 279, pp. 203-204).

334. The '866 Patent discloses stranding of the individual conductors to form each twisted pair, and specifically discloses using "SZ" stranding. The '866 Patent states that "the stranding of pair 1 can consist of a so-called helix stranding or an SZ stranding." See (translation of the '866 Patent at ¶ 3, p. 3). However, the '866 Patent does not disclose or suggest cabling, *i.e.*, twisting together the entire cable core, the plurality of twisted pairs and the configurable tape separator about a common axis to form the twisted pair cable. Rather, the '866 Patent discloses only twisting of the conductor pairs to form helixes, not twisting/cabling of the cable as a whole. As confirmed by Galen Gareis, cabling of the cable including the shielding foils disclosed in the '866 Patent would be complex, if even possible and so would be avoided.

335. The '866 Patent is also non-anticipatory because it fails to disclose the limitation of claim element 1(e) "**wherein the configurable tape separator is substantially non-conductive,**" which is also incorporated in Claim 2. Mr. Baxter contends that the '866 Patent discloses that the pair separator may be made of a metal foil, such as aluminum, or a metal foil laminated by plastic. (Baxter Rep. at ¶ 279, p. 204). In particular, Mr. Baxter alleges that the second configuration (*i.e.*, a metal foil laminated by plastic) "'is substantially non-conductive,' as the plastic laminate is non-conductive." (Id.). I have reviewed the '866 Patent and disagree with Mr. Baxter's conclusion that the '866 Patent discloses this limitation. (Baxter Rep. at ¶ 279, pp. 203-204).

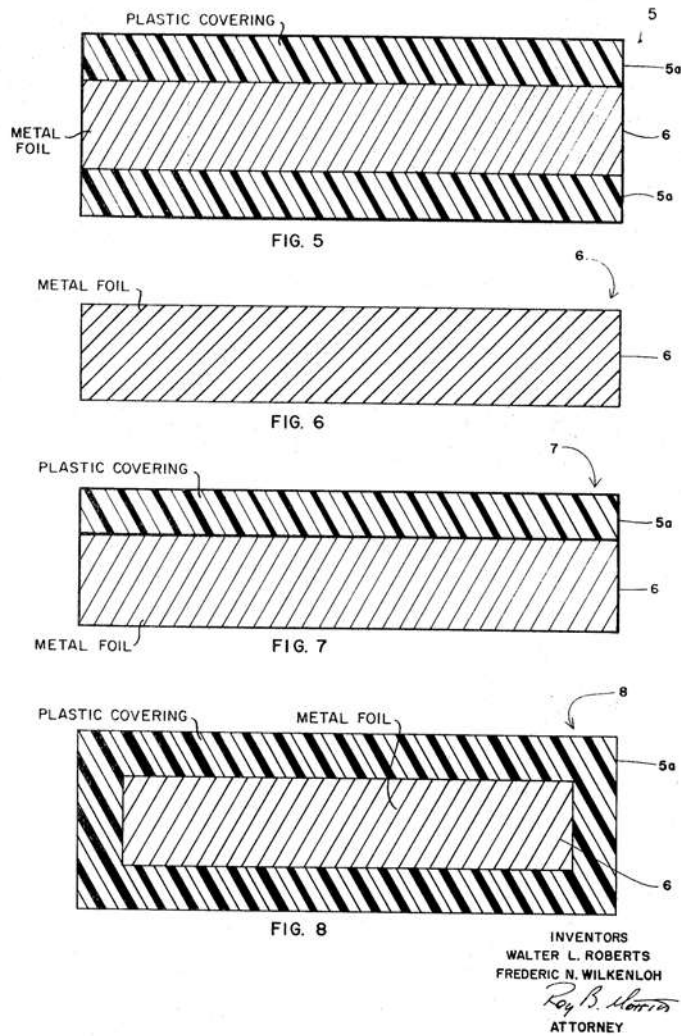
336. The '866 Patent is directed to a shielded cable. I understand that the conductive shield of the designs therein are indispensable to their proper function and would not be considered in connection with designing unshielded cables.

337. The '866 Patent does not disclose or suggest that the configurable tape separator is substantially **non-conductive**. As noted by Mr. Baxter, the shielding may be made of a **metal foil**, such as **aluminum**, or a **metal foil laminated by plastic**. Since each of these examples includes a metal foil, they are clearly **not** "substantially non-conductive." Rather, they are **conductive** by their inclusion of a metal foil. Thus, the '866 Patent only discloses **conductive** shielding tapes. The fact that the metal foils disclosed in the '866 Patent are laminated by a plastic, does **not** render them non-conductive. To the contrary, the conductor pairs of the '866 Patent comprises a metal wire coated or insulated by a dielectric insulation. However, this dielectric coating/insulation does **not** render the insulated conductor non-conductive, since the entire purpose of the insulated conductors is to conduct electrical signals and thereby carry information from one point to another.

B. Claim 2 Is Not Obvious Over A Combination Of The '866 And '683 Patents

338. Mr. Baxter opines that Claim 2 of the '999 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of the '866 and '683 Patents See (Baxter Rep. at ¶ 279 & Exh. 52). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 2 of the '999 Patent-In-Suit. Moreover, it is my further contrary conclusion that even if such a reason had existed, the combined elements of these two prior art references would not yield the subject matter as a whole recited in Claim 2 of the '999 Patent-In-Suit.

339. Mr. Baxter fails to offer any credible apparent reason why a person of ordinary skill in the art at the time of the invention would have been prompted to combine the disclosures of the ‘866 and ‘683 Patents to arrive at a separator that includes metal foil totally encased in plastic. In this regard, Mr. Baxter identifies various tape/metal foil configurations in Figure 76, p. 206 (reproduced below), suggesting that one skilled in the art would have been motivated to try the finite number of identified, predictable, solutions ... represented by the structures shown in Figure 76 **and the one additional structure with no metal component at all**. For motivation, Mr. Baxter argues alleges that removing the metallic component would have been a way to reduce material costs.



340. Contrary to Mr. Baxter's assertions, one of ordinary skill in the art would not combine the references as suggested in the interest of removing the metallic component as a way to reduce material costs. First, neither the '866 Patent nor the '683 Patent disclose or suggest providing a shield without some sort of metal foil. The '683 Patent is quite careful to detail all of the various combinations of a shield with a dielectric, choosing not to address any such shields without the conductive layer. Indeed, removal of the metallic component as suggested in the Baxter Report would not be obvious because it would defeat the purpose of using a shield. Accordingly, one

would not be motivated to combine the '683 and the '866 references as suggested, and even if they did, they would not arrive at the claimed invention.

341. In addition, I also conclude that Mr. Baxter's opinion that a combination of the '866 and '683 Patents would render Claim 2 obvious is incorrect because it is incompatible with the secondary considerations of non-obviousness that are present on the record in this case. These secondary considerations are described in greater detail below, and also in Belden's supplemental responses to Superior Essex's Interrogatory No. 6 served on September 22, 2009 which are expressly incorporated by reference herein.

342. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

343. Indeed, the success of embodying products, whether sold by Belden or by another, is in part due to a long felt and persistent need in the market that the patented inventions satisfied. In particular, the patented inventions enabled Belden to market high-speed data cables that performed at or above standards promulgated by the Telecommunications Industry Association (the "TIA") in conjunction with the Electronics Industry Association (the TIA/EIA"). (Niemiera Dep. 112:1-10.) In the high-speed data cable industry, performance above an industry specification is termed "headroom." Specifically, proposed revisions to the TIA/EIA-568-A

standard, known as “Category 6,” required telecommunications cables to have in excess of 40 dB of crosstalk isolation between the twisted pairs of conductors at 100 MHz.

344. At the time of invention, the preferred approach for meeting the higher data transmission rate requirements while achieving levels of crosstalk isolation dictated by evolving industry standards was to employ a centrally located pre-shaped support within the cable, typically in the shape of an “+”, which provided geometric separation among the twisted pairs. However, cables that included a “+” shaped separator (hereinafter a “cross-web” separator) were relatively rigid and more expensive to make due to increased material costs.

345. Other attempts were made at address the problem of crosstalk utilizing flat cable configurations, elongated fins protruding inward from the cable jacket, and rod fillers disposed between the conductor pairs. Each of these approaches presented various disadvantages including manufacturing difficulties, inconsistent performance and commercial infeasibility. [REDACTED]

[REDACTED]

346. [REDACTED]

[REDACTED]

347. In addition, each of the embodied inventions produced unexpected results given previously high levels of industry skepticism. Members of the high-speed data cable industry were particularly skeptical of the embodied inventions' merits and whether they would allow a cable to achieve comparable electrical performance to a cable with a cross-web separator. Although the test results were met with industry surprise, using the embodied inventions, the Belden entities demonstrated that enhanced Category 6 performance was achievable using a tape separator.

C. Claim 2 Is Not Obvious Over A Combination Of The '563 Reference And The '645 Patent

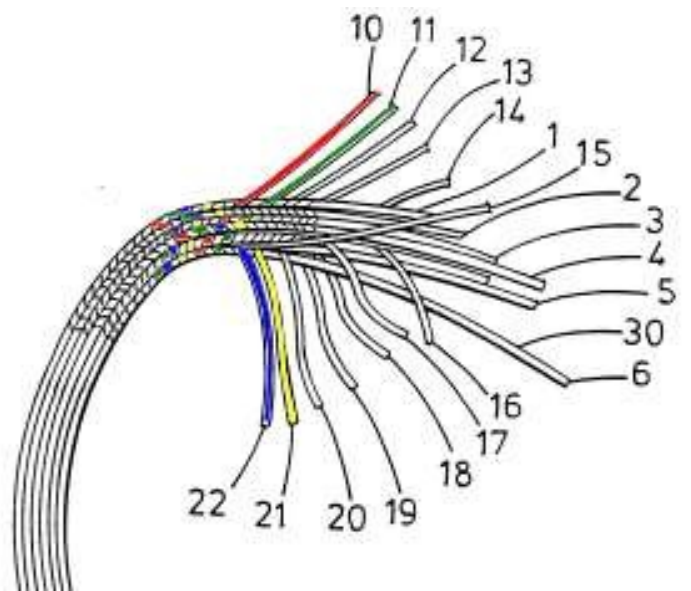
348. Mr. Baxter opines that Claim 2 of the '999 Patent-In-Suit is invalid within the meaning of 35 U.S.C. §103 because it is allegedly rendered obvious by the combination of Reference WO93/20563 (the "'563 Reference") and the '645 Patent. See (Baxter Rep. at ¶ 283 & Exh. 55). I disagree with this opinion. For the reasons that follow, it is my contrary conclusion that Mr. Baxter has not proven that there would have been an apparent reason for a person of ordinary skill at the time of the invention to have combined the elements of these two prior art references in the fashion recited in Claim 2 of the '999 Patent-In-Suit. Moreover, it is my further contrary conclusion that even if such a reason had existed, the combined elements of these two prior art

references would not yield the subject matter as a whole recited in Claim 2 of the ‘999 Patent-In-Suit.³

349. More specifically, were the disclosures of the ‘563 Reference to be combined with the disclosures of the ‘645 Patent in the manner suggested by Mr. Baxter, such a combination would not satisfy the limitation contained in claim element 1(b) (and incorporated in dependent Claim 2) of **“a configurable tape separator disposed between the plurality of twisted pairs of conductors in the unshielded twisted pair communications cable and arranged so as to separate the first twisted pair of insulated conductors from the second twisted pair of insulated conductors.”** Mr. Baxter contends that the plurality of tapes described in the ‘563 Reference wrap around the twisted pairs to separate one from another. (Baxter Rep. at ¶ 284, p. 209). However, I have reviewed the ‘563 Reference, and contrary to Mr. Baxter’s contentions it does not disclose or suggest a separator that is arranged to separate the first twisted pair from the second twisted pair. The ‘563 Reference discloses that the tapes (also referred to as braiding filaments) are braided around and interweaved with the conductors by passing a filament over one conductor and under another; however, the ‘563 Reference does not state that the braiding is performed in such a manner so as to separate one twisted pair from another. One of ordinary skill in the art would recognize that it is quite possible that the braiding is loose or otherwise formed such that it permits contact between the twisted pairs, since the ‘563 Reference does not disclose otherwise. As further support for the braiding being loose, it is described as “allow[ing] the flat cable to bend in any direct, including the direction parallel to the plane of the cable.” (p.

³ It is unclear whether Baxter is also attempting to argue that the ‘563 Reference could somehow be regarded as anticipatory prior art under 35 U.S.C. §102. (Baxter Rep. at ¶ 283). To the extent that he is making such an argument, I disagree because, for the reasons discussed in the text below, the ‘563 Reference does not disclose either expressly or inherently each and every limitation contained in Claim 2.

4, ll. 5-7). Furthermore, the '563 Reference discloses that the braiding filaments can be bonded to the conductor insulations. Thus once the braiding filaments are bonded to the conductor insulations, the insulated conductors are no longer separated from one another, but instead are joined together. Therefore, the '563 Reference does not disclose or suggest a separator that is arranged to separate the first twisted pair from the second twisted pair, as required by claim element 1(b).



350. Nor would a combination of the '563 Reference and the '645 Patent satisfy the limitation present in claim element 1(c) (and incorporated in dependent Claim 2) of “**a jacket enclosing the plurality of twisted pairs of insulated conductors and the configurable tape separator.**”

Mr. Baxter contends that the jacket is formed by heat-treating the cable to fuse the filaments. However, contrary to Mr. Baxter’s suggestions, the '563 Reference does not disclose or suggest a jacket enclosing the plurality of twisted pairs of insulated conductors and the separator, as also recited in claim 1, from which claim 2 depends. The '563 Reference discloses that “for some applications, the braiding is formed of a plastics material which h becomes bonded to the electrically insulating covering around the conductors upon the application of heat.” (See page

4, 3rd paragraph). Such a disclosure does not equate to disclosure of a jacket as recited in the claims of the ‘999 Patent-In-Suit. As noted above, the claims recite a jacket enclosing the plurality of twisted pairs of insulated conductors and the separator. As also discussed above, the ‘563 Reference does not disclose or suggest a separator within the meaning of the claims of the ‘999 Patent-In-Suit. However, assuming *arguendo*, that one were to consider the braiding filaments to be the “separator,” then if the braiding filaments are fused to the conductor insulation to form a “jacket,” that “jacket” cannot possibly enclose the plurality of twisted pairs and the separator as Claim 2 requires, because the “jacket” and “separator” are one and the same, and an object cannot enclose itself. Thus, the ‘563 Reference does not disclose or suggest a jacket enclosing the plurality of twisted pairs of insulated conductors and the separator as recited in claim element 1(c).

351. In addition, a combination of the ‘563 Reference and the ‘645 Patent would not yield the limitation recited in claim element 1(d) (and incorporated in dependent Claim 2) **“wherein the plurality of twisted pairs of insulated conductors and the configurable tape separator are cabled about a common axis to form the unshielded cable.”** Mr. Baxter correctly observes the ‘563 Reference discloses a flat cable. Mr. Baxter then alleges, however, that one of ordinary skill in the art would have combined the teachings of the ‘645 Patent with the flat cable of the ‘563 Reference to arrive at twisting the disclosed cable of the ‘563 Reference about a common axis. I address this allegation below.

352. The ‘563 Reference also does not disclose or suggest that the plurality of twisted pairs of insulated conductors and the configurable separator are cabled about a common axis to form the unshielded twisted pair communications cable. Here, Mr. Baxter acknowledges that the ‘563 Reference does not disclose cabling, but looks to the ‘645 Patent to supply this missing element.

Mr. Baxter states that the '645 Patent in FIG. 1 discloses a “flat configuration coiled or twisted about a common axis.” This statement is false. As Mr. Baxter elsewhere acknowledges, the '645 Patent discloses a cable in which a plurality of conductor pairs are fused/adhered to a sheet and wound into a coil-like shape. The '645 Patent does not disclose or suggest twisting (cabling) the sheet and fused conductor pairs about a common axis. Coiling as shown in the '645 Patent is certainly not “twisting” as recited in the claims and specification of the '999 Patent-In-Suit, since the coil-like shape disclosed in the '645 Patent has no spiral or twisted form. Furthermore, although the finished coil has a central longitudinal axis, the process of rolling or coiling up the sheet with the fused conductors does not involve twisting, or even rolling, the sheet and the conductor pairs about a common axis. Rather, as Galen Gareis has confirmed, the axis about which the sheet is rolled progressively moves throughout the coiling process, and there is no common axis about which the sheet and the plurality of conductor pairs are wound.

353. Moreover, even were the disclosures of the '563 Reference and the '645 Patent to be combined in the manner advocated by Mr. Baxter, they would not satisfy the limitation present in Claim 2 itself that “**[t]he unshielded twisted pair communications cable as claimed in claim 1, wherein the configurable pair separator is arranged so as to define at least two channels and wherein the first twisted pair of insulated conductors is disposed at least partially within a first channel and the second twisted pair of insulated conductors is disposed at least partially within a second channel.**” Mr. Baxter argues that one of ordinary skill in the art would have been motivated to combine the teachings of the '563 Reference and the '645 Patent to “apply the twisting of the flat separator about a common axis to the cable of the '563 Reference to finish the cable.” (Baxter Rep. at ¶ 285, p. 212). But to the contrary, the '563 Reference (whether considered alone or in combination with the '645 Patent) does not

disclose or suggest that the “configurable pair separator is arranged so as to define at least two channels and wherein the first twisted pair of insulated conductors is disposed at least partially within a first channel and the second twisted pair of insulated conductors is disposed at least partially within a second channel” as recited in Claim 2. In the ‘563 Reference, reproduced above, when the filaments are braided together with the insulated conductors, gaps or holes are left between the filaments. For example, as shown in the FIG. 1 of the ‘563 Reference, reproduced above, the red and green filaments 10 and 11, respectively are woven over conductor 1, under conductor 2, over conductor 3, under conductor 4, etc., and similarly, the blue and yellow filaments, 22 and 21, respectively, are woven in the opposite direction, over conductor 6, under conductor 5, over conductor 4, etc. This pattern of braiding leaves gaps or holes, as can be seen in FIG. 1, and therefore creates an open-weave mesh with the insulated conductors, rather than channels after which the individually twisted pairs could be located. In addition, the presence of channels after fusing the braiding filament cannot be inferred because there is no teaching or suggestion as to how much melting or material flow might occur, if any, during the process. Accordingly, Claim 2 distinguishes over the proposed combination of references for at least this additional reason.

354. Mr. Baxter also has failed to offer any credible apparent reason why a person of ordinary skill in the art at the time of the invention would have been prompted to combine the disclosures of the ‘563 Reference and the ‘645 Patent to arrive at the Claim 2 invention. Mr. Baxter states that the ‘645 Patent discloses a fusing tape sheet, which is used for aligning and fixing the twisted pairs, and that “it would have been obvious ... to include the teachings of the Ikeda ‘645 Patent in the Wood ‘563 reference in order to enhance producing efficiency and reduce a working cost by commonly using insulated core wires, and simplifying an identifying means for

coloring, marking and the like.” This reasoning is flawed. The benefits disclosed in the ‘645 Patent do not arise merely from rolling the sheet with the fused conductors into a coil, but rather from the structure as a whole, including the sharing of insulation cores and fusing of the insulation cores to the sheet. Mr. Baxter further states, that one of ordinary skill in the art would apply the twisting of the flat separator about a common axis in order to finish the cable and that the similarities between the two cable structures would lead one of ordinary skill in the art to expect predictable results by this combination. These assertions are wholly without merit or basis in fact. The two cables shown in the ‘563 Reference and the ‘645 Patent respectively are not similar, but rather have very different structures. The ‘563 Reference and ‘645 Patent, whether considered alone or in combination, provide no indication that the braided cable of the ‘563 Reference could even be rolled up into a coil as disclosed in the ‘645 Patent. Furthermore, since the conductors of the ‘563 Reference are already held in alignment by the fact that they are braided together, and the cable of the ‘563 Reference is already finished because the braiding filaments are fused together with the insulated conductors “in order to set the cable into a desired shape,” means that there is no reason to attempt to coil the cable as shown in the ‘645 Patent.

355. In addition, I also conclude that Mr. Baxter’s opinion that a combination of the ‘563 Reference and ‘645 Patent or other unspecified prior art would render Claim 2 obvious is incorrect because it is completely incompatible with the secondary considerations of non-obviousness that are present on the record in this case. I have already discussed these considerations above at paragraphs 341 to 347, and I expressly incorporate that discussion again by reference herein.

356. Finally, Mr. Baxter argues that Claim 2 is allegedly invalid in view of July 71, 2009 office action from the Patent Office in connection with the pending reexamination of the ‘999

Patent-In-Suit. (Baxter Rep. at ¶ 268, ¶ 280 & Exh. 57). Pursuant to my understanding of the law as presented above, this argument does not merit a response because non-final decisions made by the Examiner in reexamination proceedings are of little or no evidentiary relevance in a co-pending litigation, and are viewed by the courts as more prejudicial than probative on the issue of patent validity.

III. Reservation

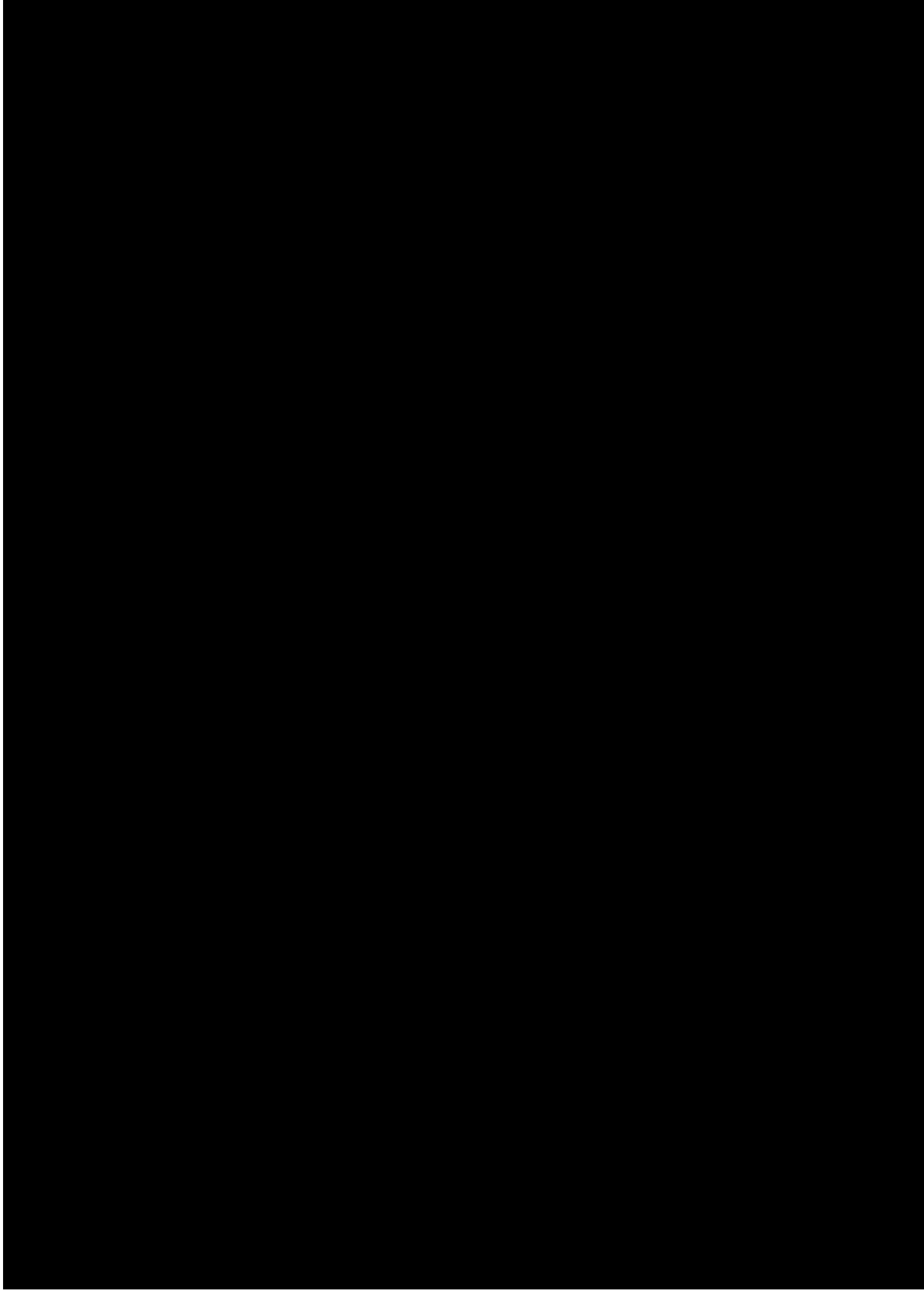
357. I expressly reserve the right to modify or supplement this report based upon any additional information produced or presented to me in this litigation and/or based upon the Court's claim construction order.

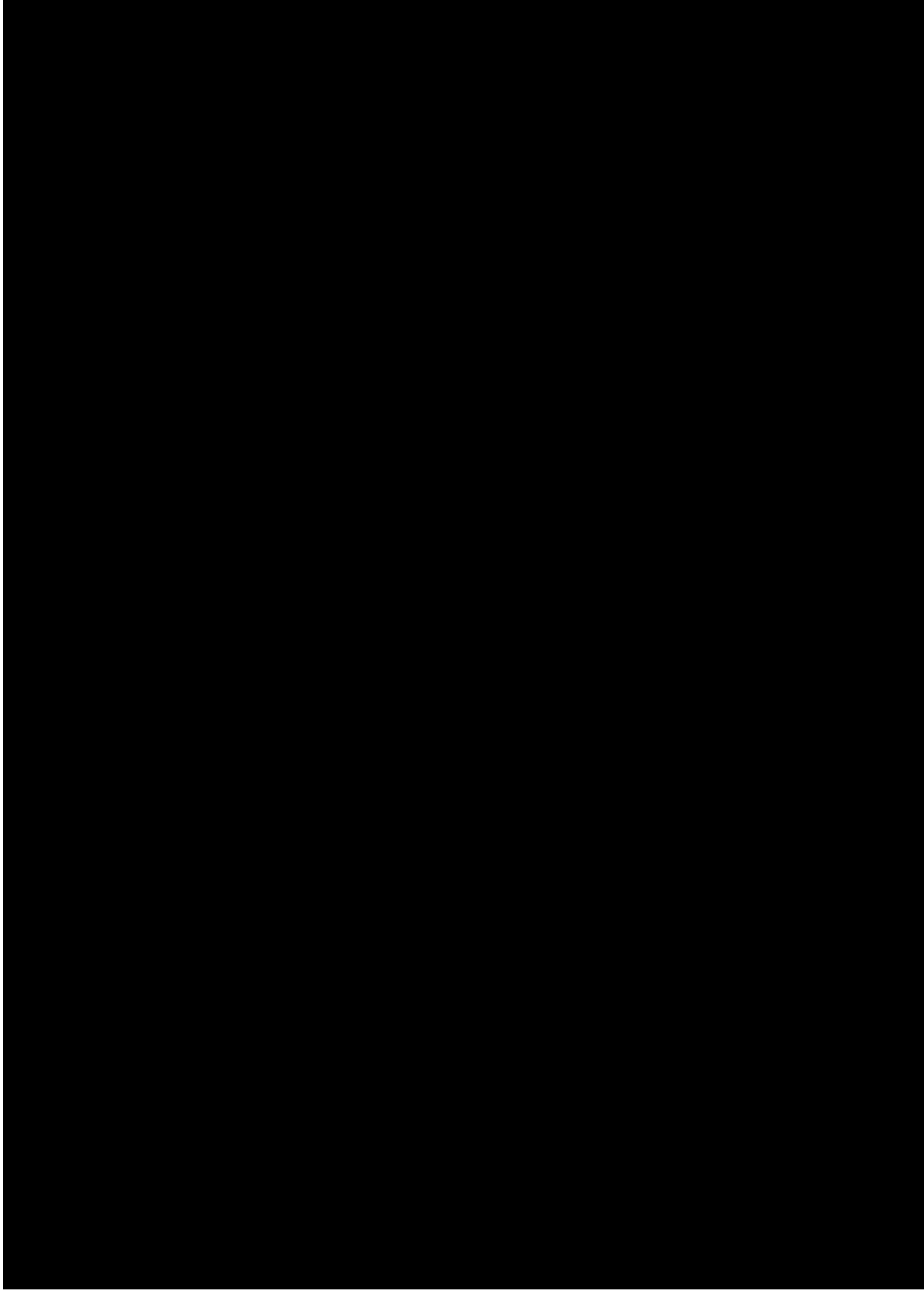
358. For example, I understand that Superior Essex purportedly served a supplemental invalidity report written by Mr. Baxter on Tuesday, October 13, 2009. I further understand that according to the Court's Scheduling Order in this case, the deadline for Superior Essex's invalidity report was September 23, 2009. I have not reviewed this document or any attached exhibit(s). However, I reserve the right to respond to any opinions that Mr. Baxter may express therein, if he is allowed to present this just produced report.

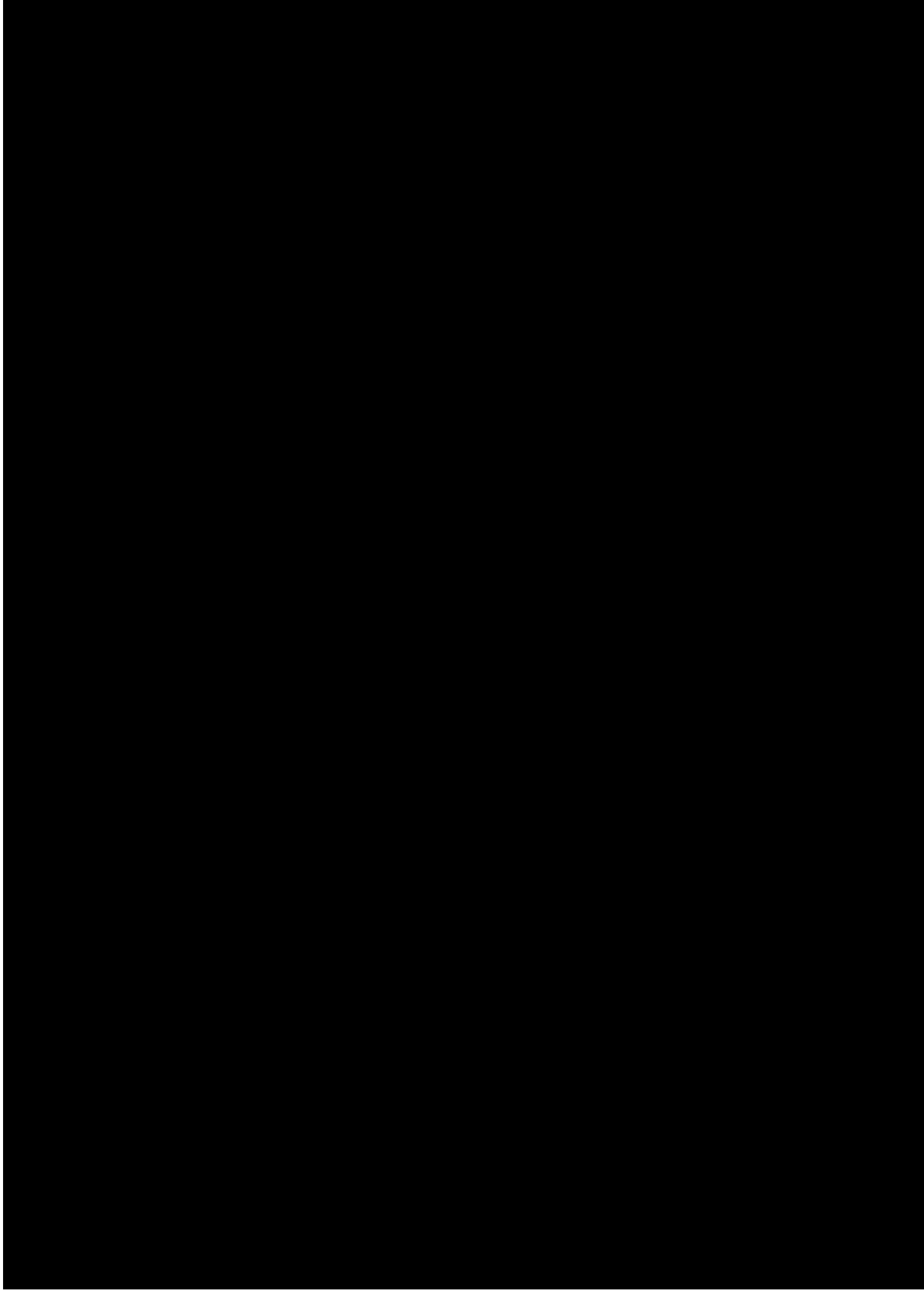


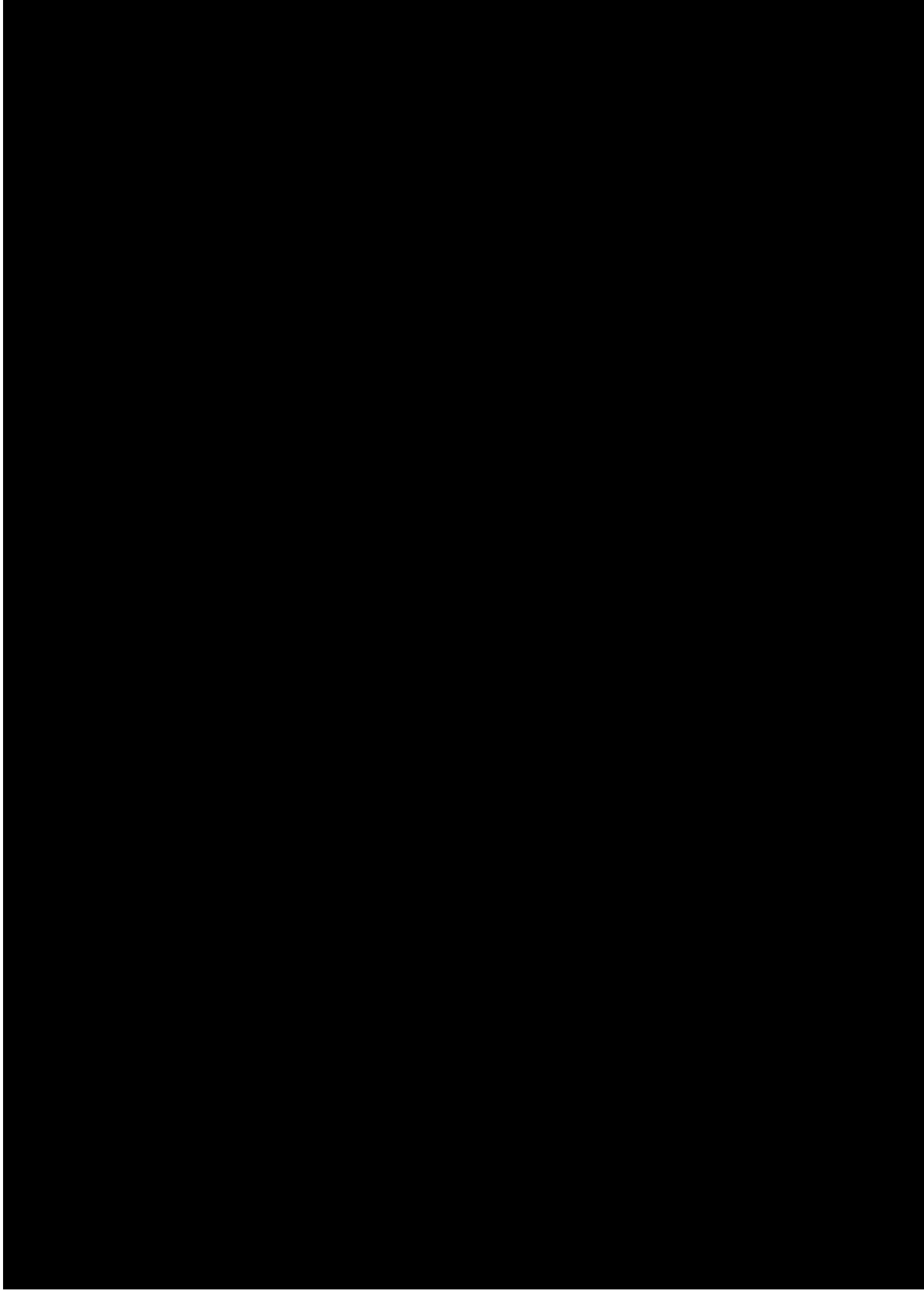
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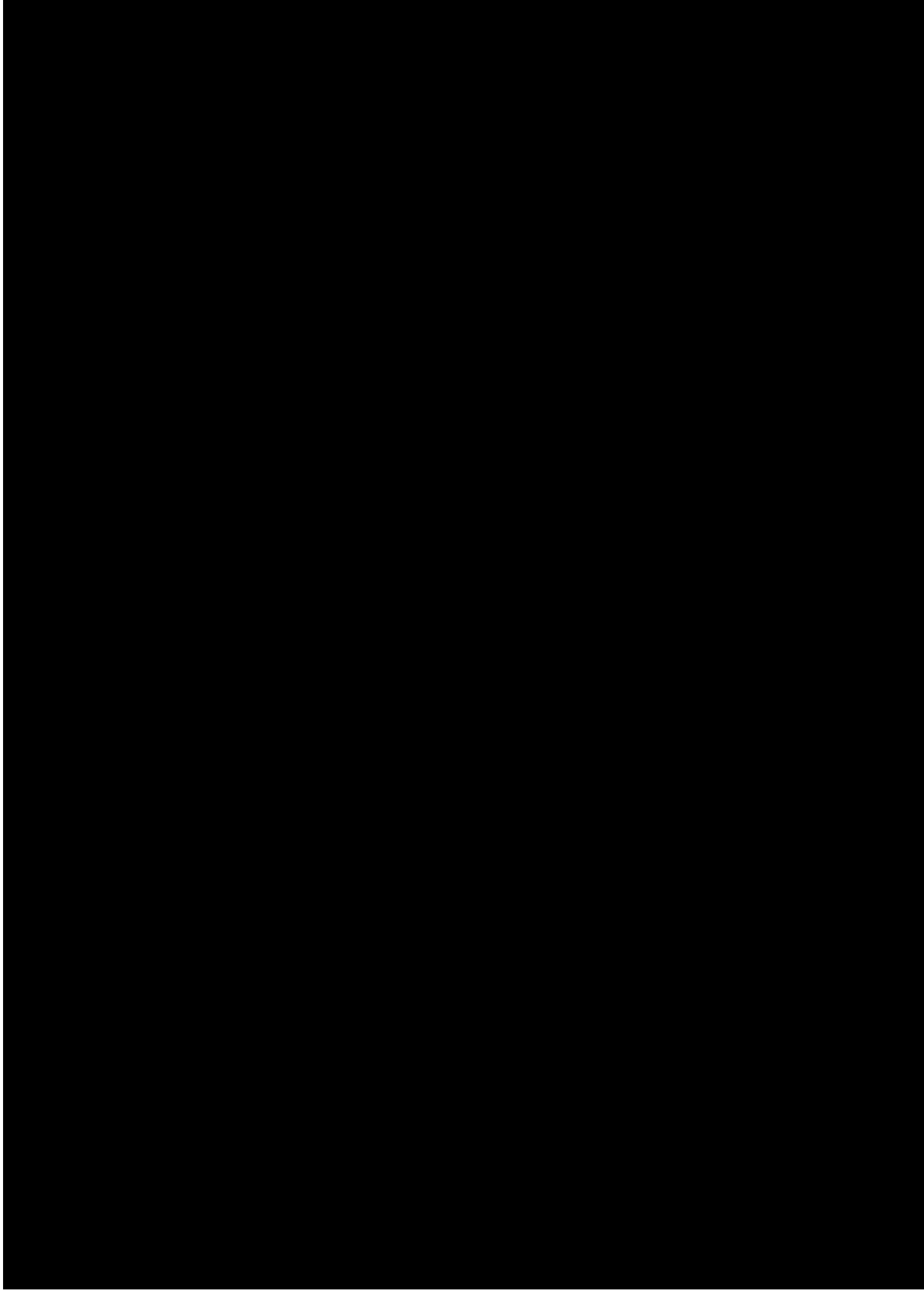
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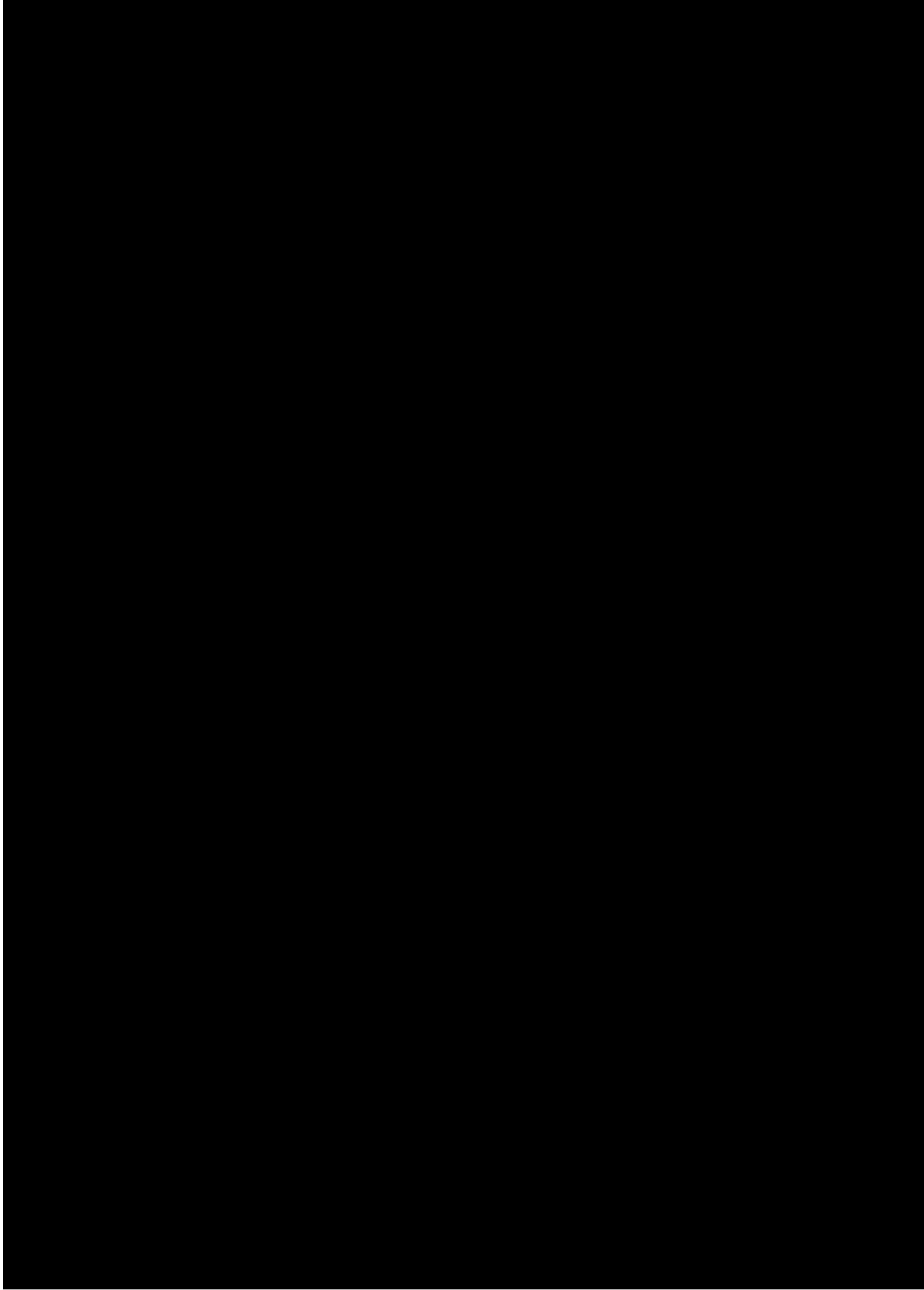


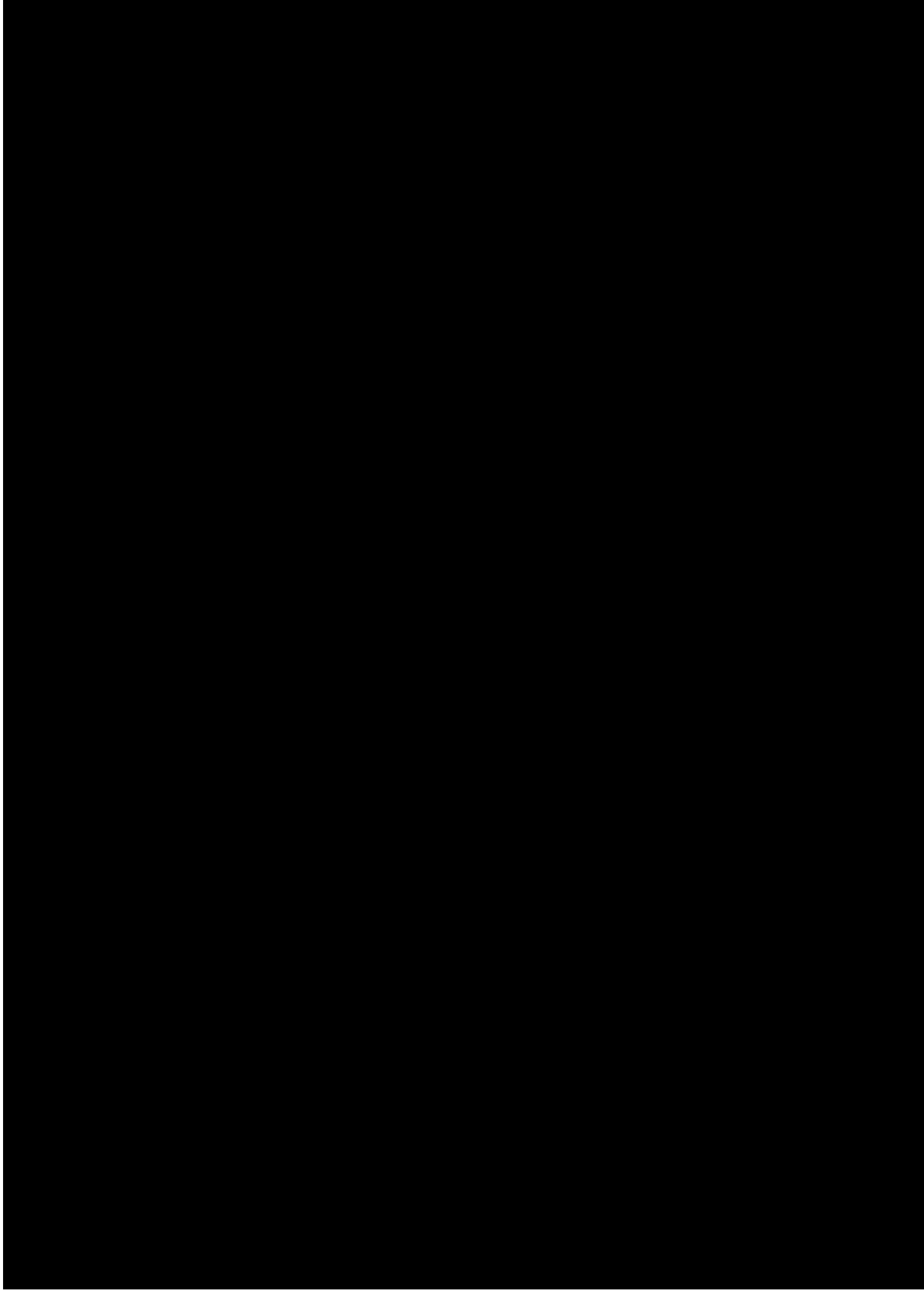


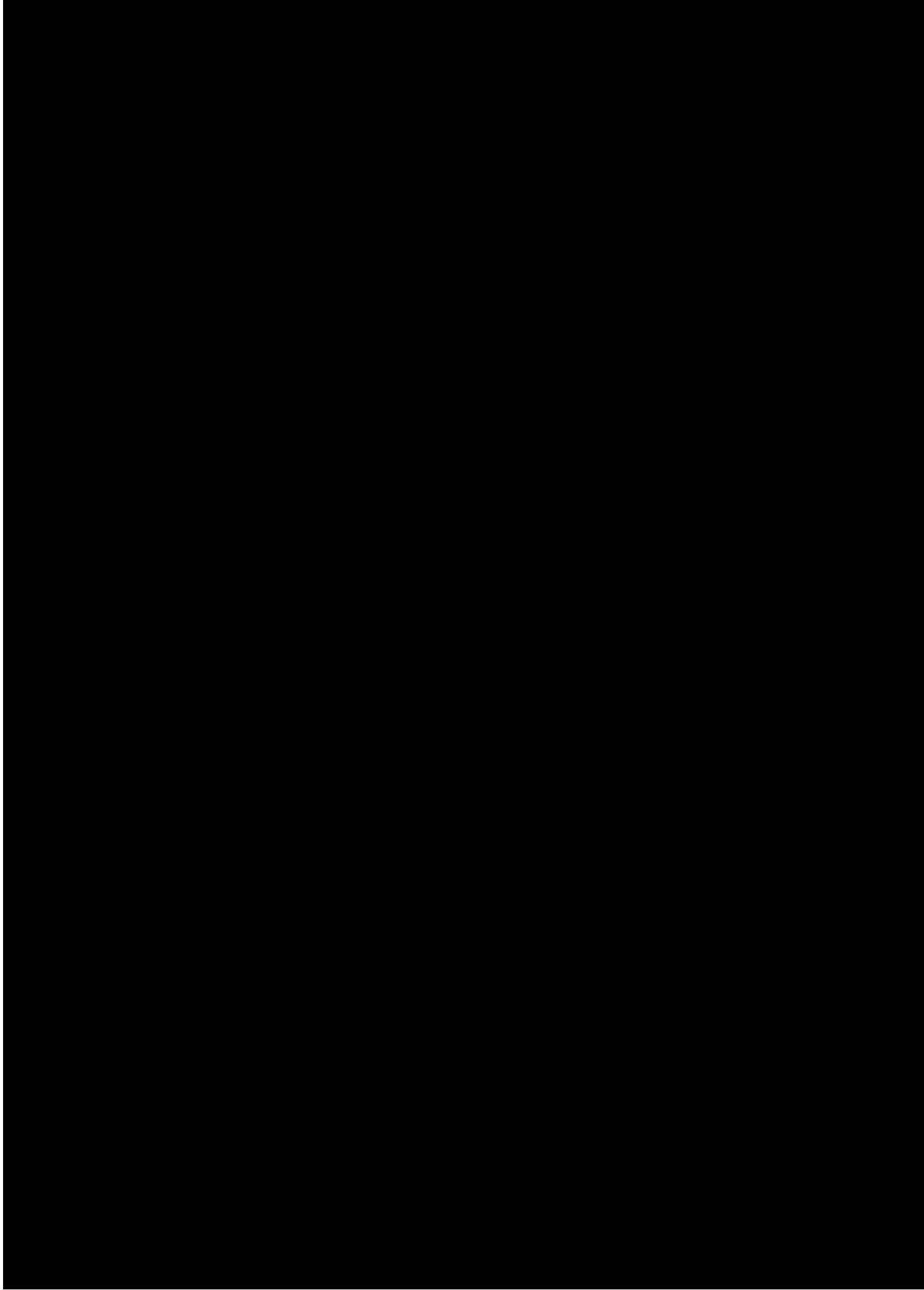


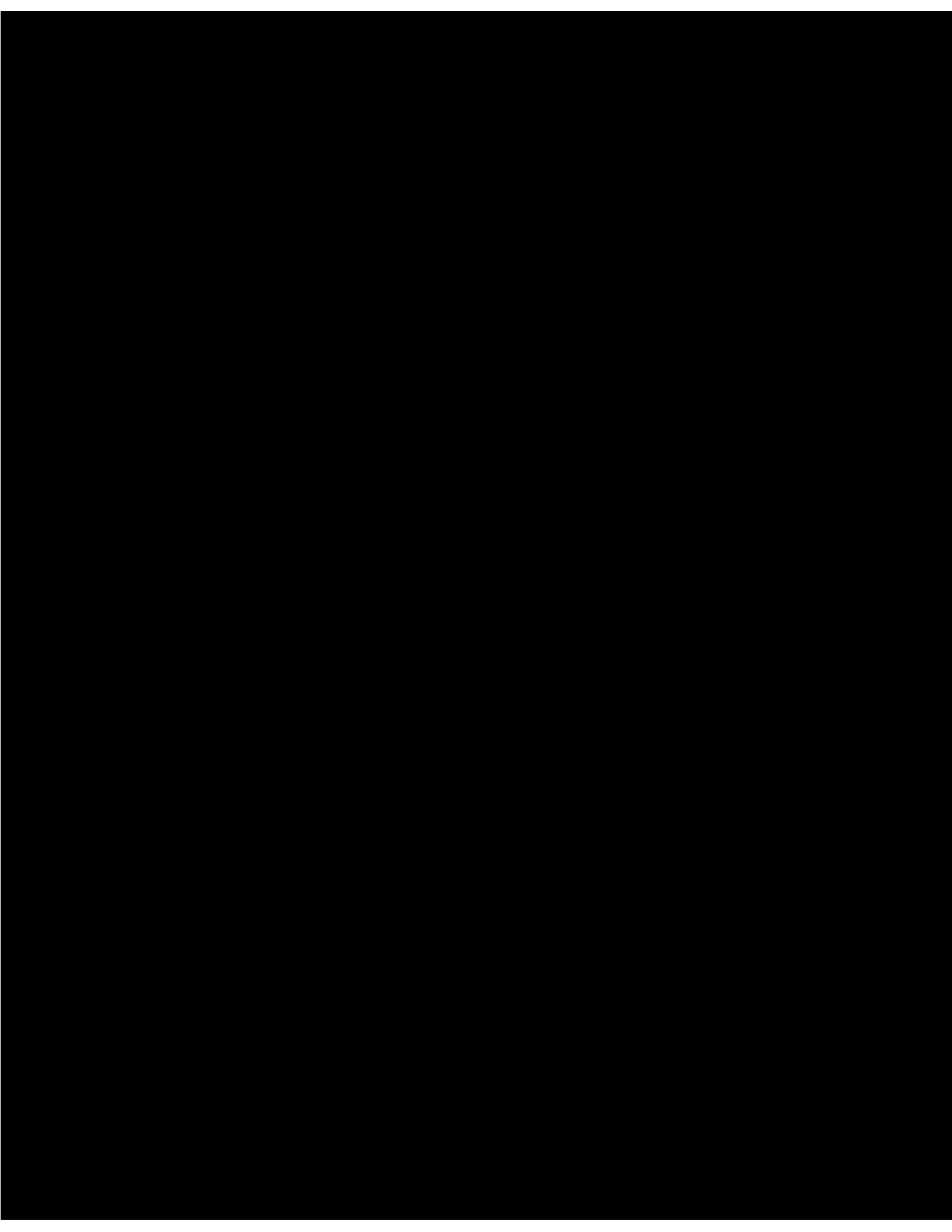


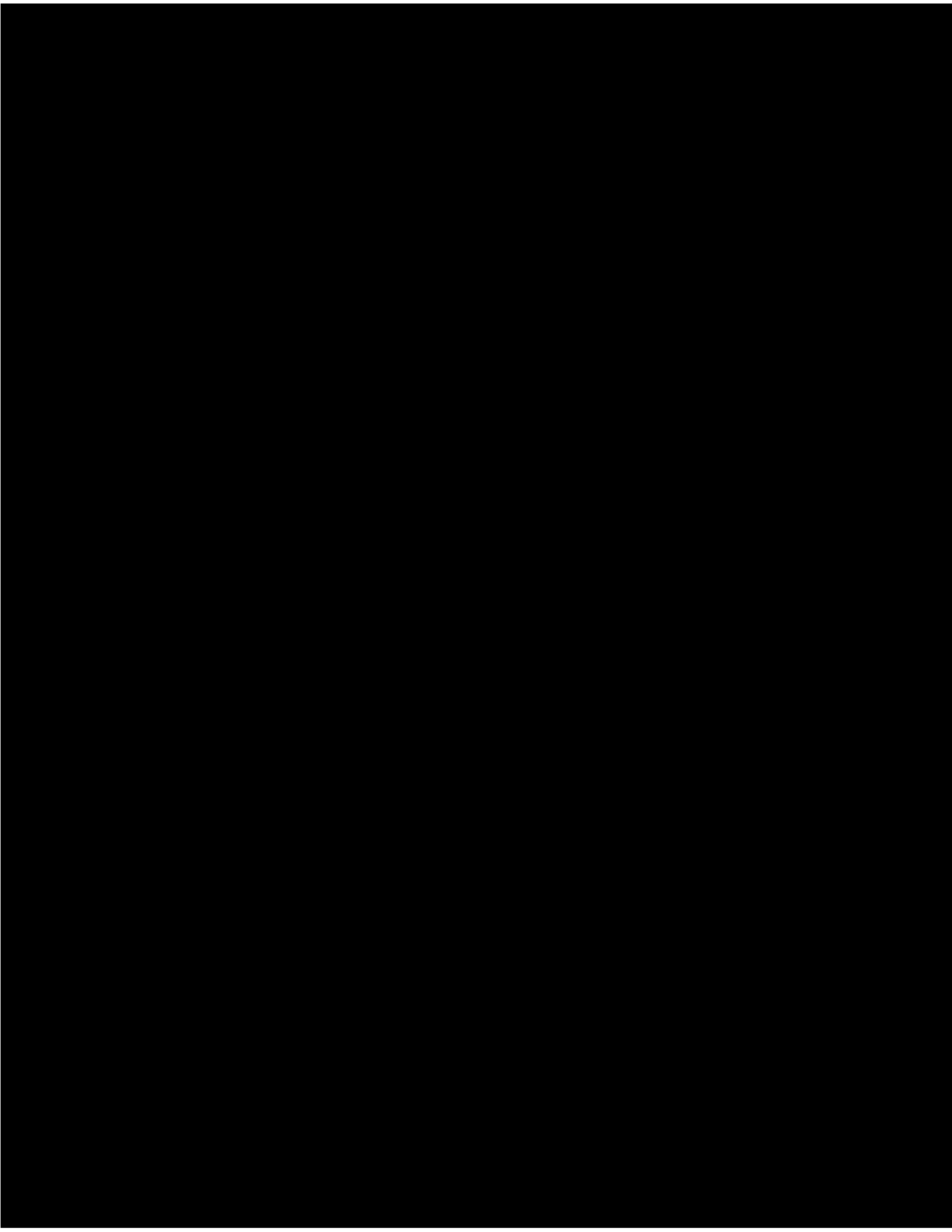


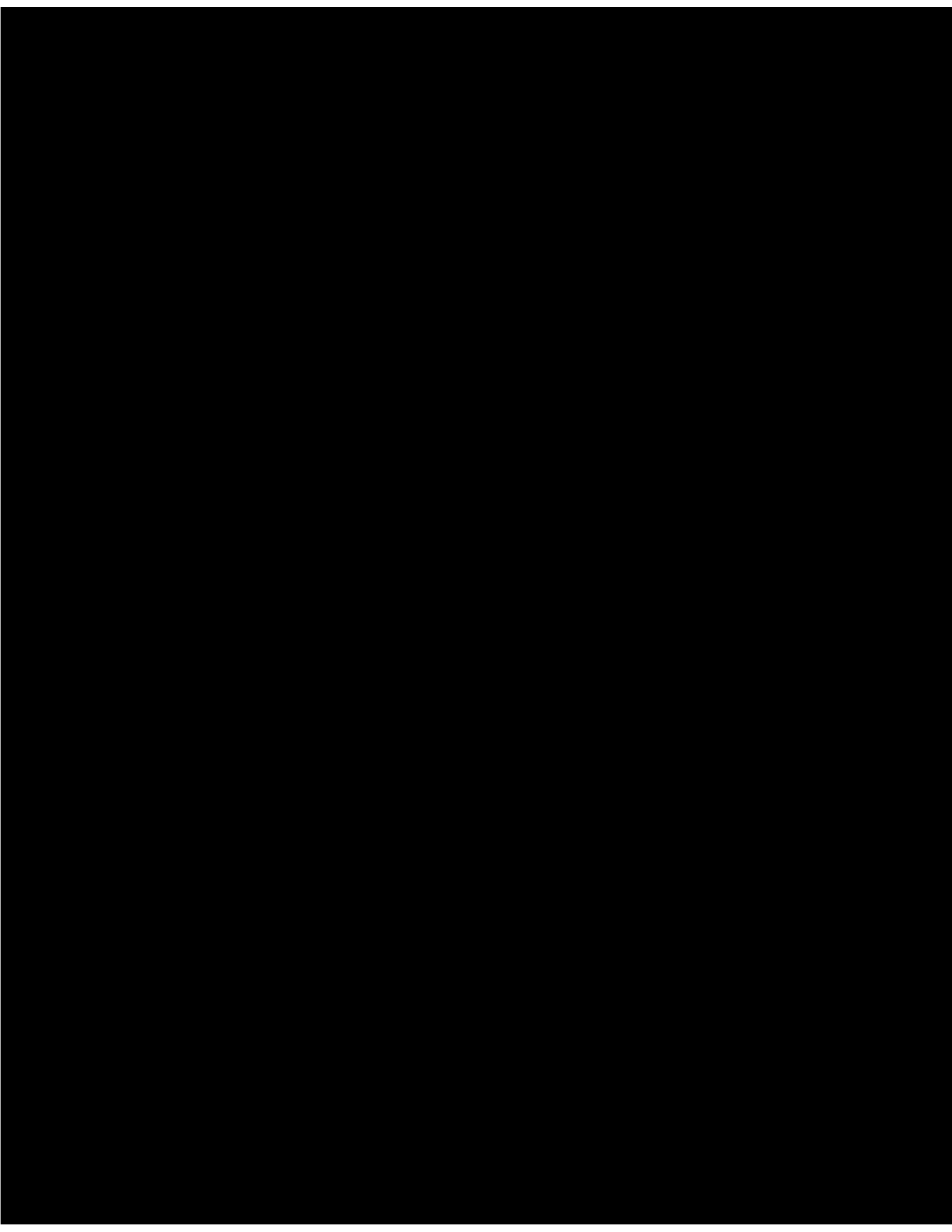


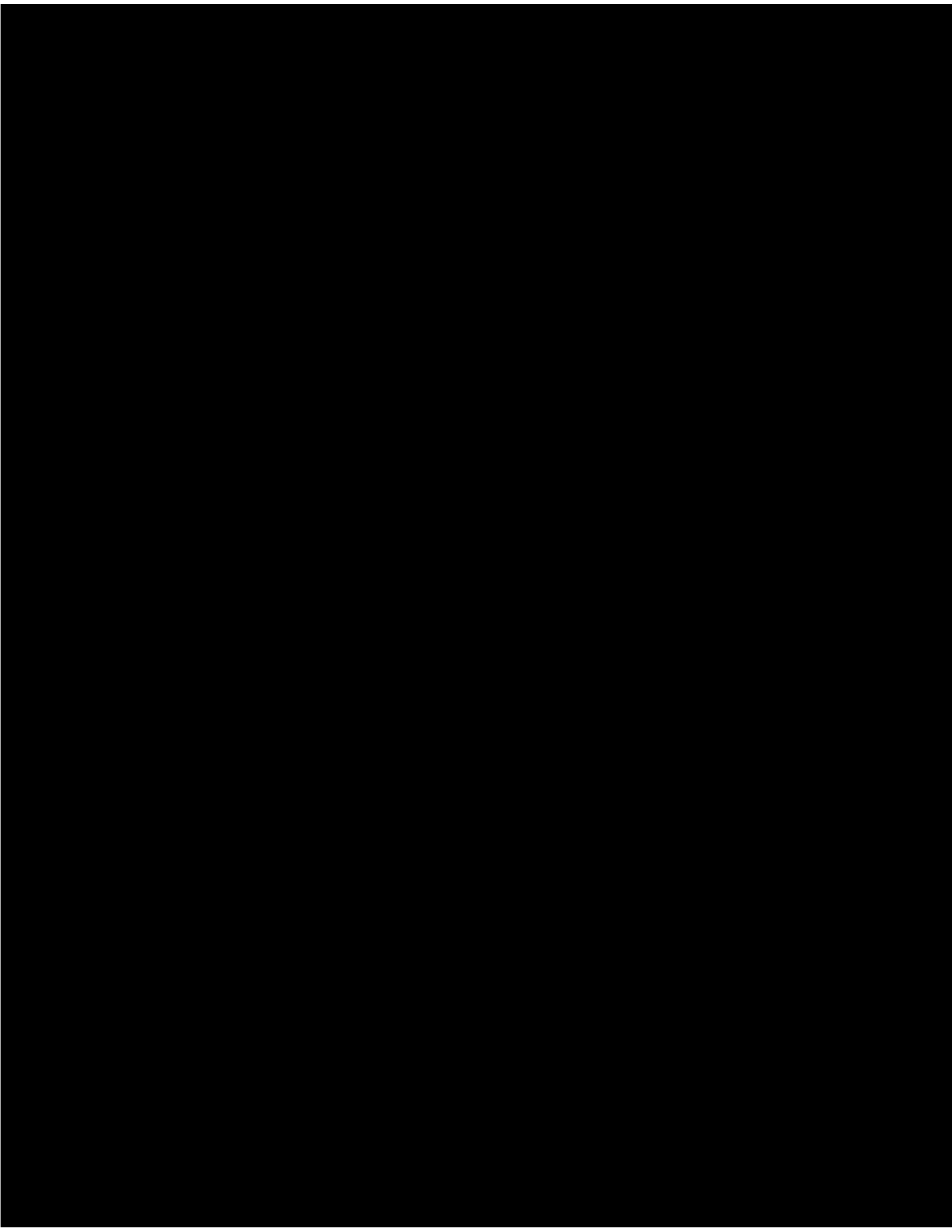


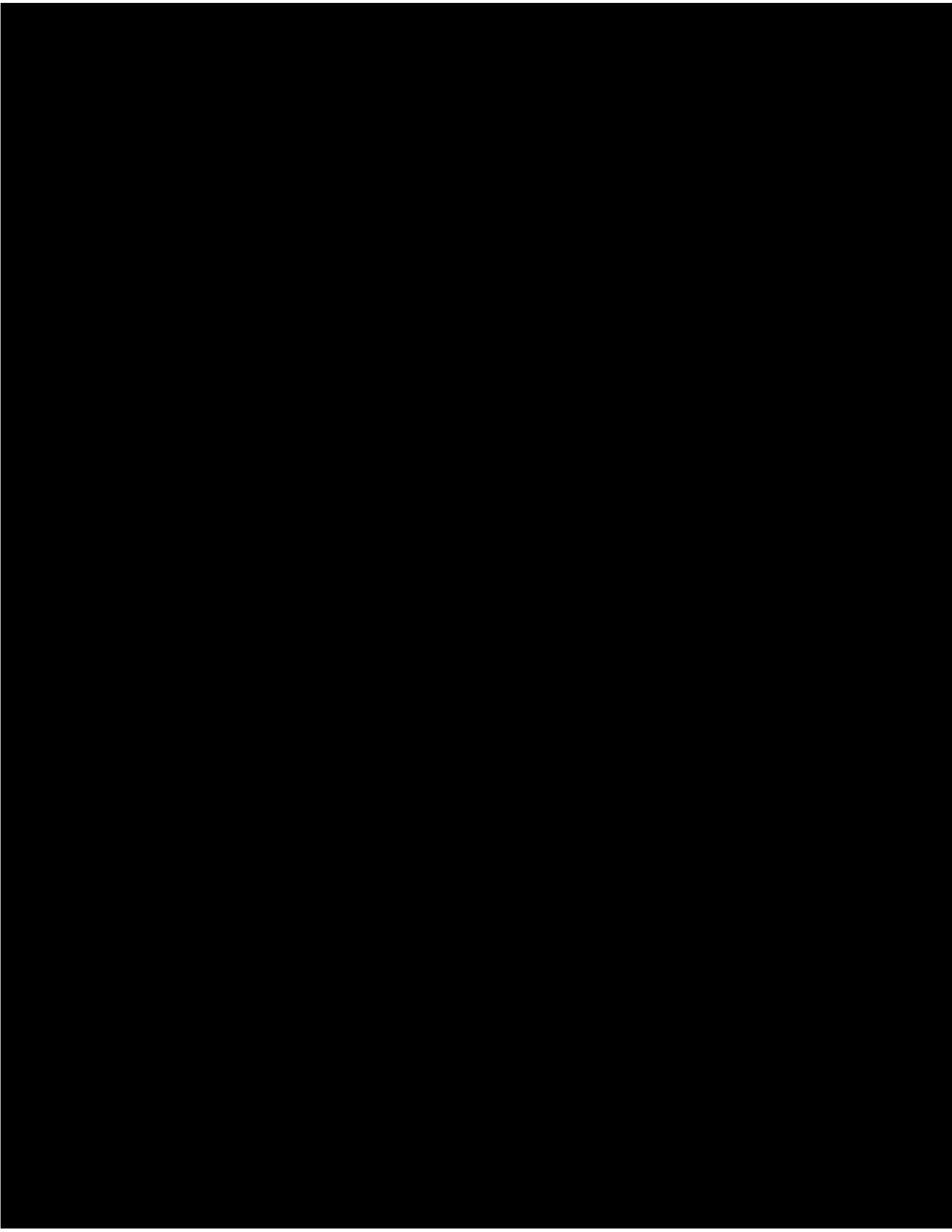


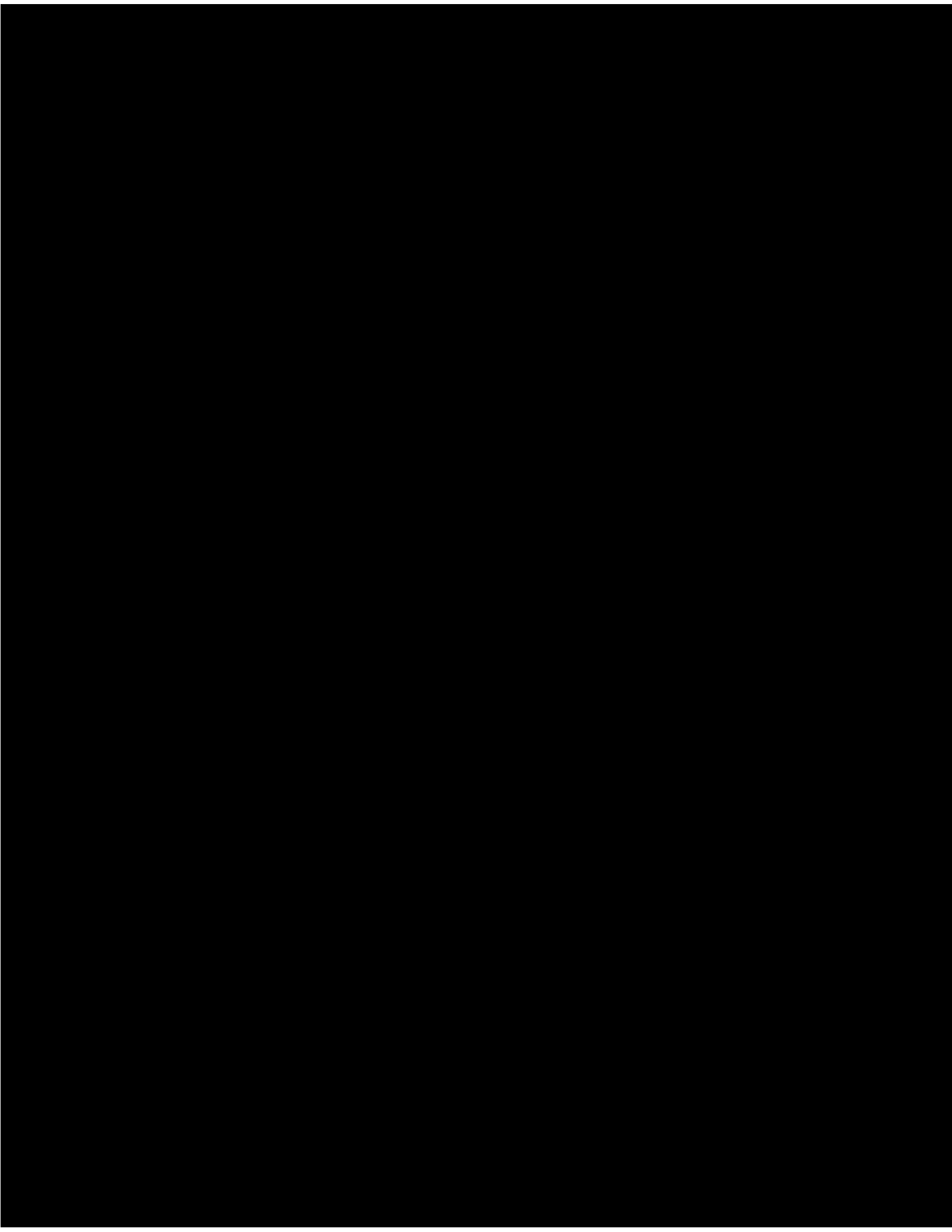












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