

**U.S. DEPARTMENT OF COMMERCE
UNITED STATES PATENT AND TRADEMARK OFFICE
REGISTRATION EXAMINATION
FOR PATENT ATTORNEYS AND AGENTS**

August 27, 1997

Morning Section (100 Points)

Time: 3 Hours

DIRECTIONS

This section of the examination is an open book examination. You may use books, notes, or other written materials that you believe will be of help to you *except* you may not use prior registration examination questions and/or answers. Books, notes or other written materials containing prior registration examination questions and/or answers *cannot* be brought into or used in the room where this examination is being administered. If you have such materials, you must give them to the test administrator before this section of the examination begins.

All questions must be answered in SECTION 1 of the Answer Sheet which is provided to you by the test administrator. You must use a No. 2 (or softer) lead pencil to record your answers on the Answer Sheet. Darken *completely* the circle corresponding to your answer. You must keep your mark within the circle. Erase *completely* all marks except your answer. Stray marks may be counted as answers. No points will be awarded for incorrect answers or unanswered questions. Questions answered by darkening more than one circle will be considered as being incorrectly answered.

This section of the examination consists of fifty (50) multiple choice questions, each worth two (2) points. Do not assume any additional facts not presented in the questions. When answering each question, unless otherwise stated, assume that you are a registered patent practitioner. Any reference to a practitioner is a reference to a registered patent practitioner. The most correct answer is the policy, practice, and procedure which must, shall, or should be followed in accordance with the U.S. patent statutes, the PTO rules of practice and procedure, the Manual of Patent Examining Procedure (MPEP), and the Patent Cooperation Treaty (PCT) articles and rules, unless modified by a subsequent court decision or a notice in the *Official Gazette*. There is only one most correct answer for each question. Where choices (A) through (D) are correct and choice (E) is "All of the above," the last choice (E) will be the most correct answer and the only answer which will be accepted. Where two or more choices are correct, the most correct answer is the answer which refers to each and every one of the correct choices. Where a question includes a statement with one or more blanks or ends with a colon, select the answer from the choices given to complete the statement which would make the statement *true*. Unless otherwise explicitly stated, all references to patents or applications are to be understood as being U.S. patents or regular (non-provisional) utility applications for utility inventions only, as opposed to plant or design applications for plant or design inventions. Where the terms "USPTO," "PTO," or "Office" are used in this examination, they mean the U.S. Patent and Trademark Office.

You may write anywhere on this examination booklet. However, do not remove any pages from the booklet. Only answers recorded in SECTION 1 of your Answer Sheet will be graded. **YOU MUST SCORE AT LEAST 70 POINTS TO PASS THIS SECTION OF THE REGISTRATION EXAMINATION.**

DO NOT TURN THIS PAGE UNTIL YOU ARE INSTRUCTED TO

1. On March 20, 1997, inventor B filed a patent application in the PTO claiming invention X. Inventor B did not claim priority based on a foreign application filed by inventor B on June 3, 1996, in the Patent Office of Germany. In the foreign application, inventor B disclosed and claimed invention X, which inventor B had conceived on October 10, 1995, and reduced to practice on January 5, 1996, all in Germany. The patent examiner issued an Office action where all the claims in the patent application were properly rejected under 35 U.S.C. § 102(a) and (e) as being anticipated by a U.S. patent granted to inventor Z on November 5, 1996, on a patent application filed in the PTO on February 6, 1995. There is no common assignee between Z and B, and they are not obligated to assign their inventions to a common assignee. Moreover, inventor Z, independently of inventor B, invented invention X, and did not derive anything from inventor B. The U.S. patent discloses, but does not claim, invention X. Which of the following is/are appropriate response(s) which could overcome the rejections under § 102(a) and (e) when timely filed?

- (A) Amend the claims to require particular limitations disclosed in inventor B's application, but not disclosed or suggested in inventor Z's patent, and argue that the limitations patentably distinguish the claimed invention over the prior art.
- (B) File an antedating affidavit or declaration under 37 CFR § 1.131 showing conception on October 10, 1995, and reduction to practice on January 5, 1996, all in Germany.
- (C) File a claim for the right and benefit of foreign priority wherein the German application is correctly identified, file a certified copy of the original German patent application, and argue that as a result of the benefit of foreign priority, the U.S. patent is no longer available as a prior art reference against the claims.
- (D) (A), (B) and (C).
- (E) (A) and (C) only.

2. Which of the following scenarios is most likely to bar X and Y from being joint inventors in an application?

- (A) X and Y worked on the invention during the same time frame but in different physical locations.
- (B) X's contribution was solely to claim 1, whereas inventor Y's contribution was solely to claim 2.
- (C) X discovered that the source of the trouble with the operation of his paper press was its slow speed and concluded that a slight change in wire slope might improve the speed. When informed of this, inventor Y, who was very skeptical at first, made the change in the slope of the wire and found to his surprise that a significant improvement in speed did in fact occur.
- (D) X and Y worked on the invention while in the employ of different employers.
- (E) X's contribution to the invention amounted to about 95%, whereas Y's contribution amounted to only about 5 %.

3. Inventors Apple and Cherry are employed by Fruit Company, each with knowledge of the other's work, and with an obligation to assign inventions to Fruit Company. Apple invented A in September 1996. On October 30, 1996, Cherry modified A to AB, an obvious improvement of A. Apple filed a patent application in the PTO on November 6, 1996, claiming invention A. Cherry filed a patent application in the PTO on February 11, 1997, claiming AB. In an Office action in Cherry's application, the claims to AB are provisionally rejected under 35 U.S.C. § 102(e)/103 over Apple's application, and provisionally rejected for double patenting over Apple's application. These are the only remaining rejections. In order to properly overcome the rejections and ensure that Fruit Company can sue an alleged infringer of claims to AB, Cherry should:

- (A) File a terminal disclaimer and appropriate fee.
- (B) File an affidavit or declaration under 37 CFR § 1.131 showing a date of invention for AB prior to the invention of A.
- (C) File an affidavit or declaration under 37 CFR § 1.131 showing October 30, 1996, to be the date of invention of AB, a petition under 37 CFR § 1.183 to waive the prohibition of the use of 37 CFR § 1.131 affidavits or declarations where the same patentable invention is being claimed, and a terminal disclaimer and appropriate fee.
- (D) File an affidavit or declaration under 37 CFR § 1.131 showing the date of invention of AB to be prior to the filing date of Apple's application, a petition under 37 CFR § 1.183 to waive the prohibition of the use of 37 CFR § 1.132 affidavits or declarations where substantially the same patentable invention is being claimed, and a disclaimer of any patent which may issue and the appropriate fee.
- (E) File an affidavit or declaration under 37 CFR § 1.131 showing the date of invention of AB to be prior to the filing date of Apple's application.

4. Independently of each other, M and Z invented the same tennis racket in the United States. A U.S. patent was granted to M on February 18, 1997, on an application filed on April 12, 1995, claiming the same tennis racket. On March 10, 1997, Z filed a patent application in the PTO claiming the same tennis racket. There is no common assignee between M and Z, and they are not obligated to assign their inventions to a common assignee. M and Z filed their respective patent applications diligently shortly after each conceived the tennis racket invention. Under which of the following provisions of 35 U.S.C. § 102 is the U.S. patent to M prior art with regard to the tennis racket claimed by Z?

- (A) 35 U.S.C. § 102(a).
- (B) 35 U.S.C. § 102(e).
- (C) 35 U.S.C. § 102(g).
- (D) (A) and (B) only.
- (E) (A), (B), and (C).

5. X invented a glass cutter. On June 20, 1994, X filed a first patent application in the PTO wherein X disclosed and claimed the glass cutter. On September 20, 1995, X filed a second patent application in the PTO, again disclosing and claiming the glass cutter. The disclosure in the second application is identical to the disclosure in the first application, but the second application did not refer to the first application, or otherwise indicate that the second application was a continuation of the first application. The first application was expressly abandoned on September 21, 1995. On January 15, 1997, X filed a third application in the PTO, disclosing and claiming the glass cutter. In the first sentence of the specification of the third application, X stated that the third application was a continuation application of the second application. The second application was expressly abandoned on January 16, 1997. X later amended the first sentence of the third application to state that the second application was "now abandoned." In an Office action dated May 5, 1997, the claims in the third application were rejected as being anticipated under 35 U.S.C. § 102(b) by a foreign patent published on August 1, 1994. There is no difference between the glass cutter described in the foreign patent and the glass cutter which is claimed. The foreign patent provides an enabling disclosure to make the claimed glass cutter. At the time it is made, the rejection is

- (A) improper because the third application has the benefit of the filing date of the second application which, in turn, has the benefit of the first application which, in turn, antedates the reference.
- (B) improper because the third application has the benefit of the filing dates of the first and second applications, and the foreign patent is antedated by the filing date of the first application.
- (C) improper because the foreign patent is effective as a publication after the filing date of the first application.
- (D) proper because the third application has the benefit of the filing date of the second application, but not the first application, and the foreign patent was published more than one year before the filing date of the second application.
- (E) proper because the effective filing date of the third application is January 15, 1997, which is more than one year after the publication date of the foreign patent.

6. A Demand for International Preliminary Examination must be filed with:

- (A) The Receiving Office.
- (B) The International Bureau.
- (C) The International Preliminary Examining Authority.
- (D) The International Searching Authority.
- (E) Any of the above.

7. X invented a chemical composition. On June 20, 1994, X filed a first patent application in the PTO wherein X disclosed and claimed the same composition, and claimed benefit of priority of a British application. The patent examiner twice rejected the claims in the first application under 35 U.S.C. § 112, first paragraph, for lack of an enabling disclosure. The examiner maintained the rejection in a final rejection. On appeal to the Board of Patent Appeals and Interferences, the rejection was affirmed in a decision dated February 4, 1997. On March 31, 1997, X filed a second application disclosing and claiming the same chemical composition, and containing an enabling disclosure of how to make the composition. The first sentence of the specification of the second application contains a specific reference to the first application. On April 1, 1997, X expressly abandoned the first application, and amended the first sentence of the second application to state that the first application was "now abandoned." X did not seek judicial review of the Board's decision. In an Office action dated May 5, 1997, all the claims in the second application were rejected as being anticipated under 35 U.S.C. § 102(b) over an article in Composition Magazine which was published and on newsstands in the United States and Great Britain in June 1995. The article provides a full and enabling description of the claimed chemical composition, and provides readers with addresses in the United States and Great Britain where the composition may be purchased. The rejection is

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- (A) improper because the claims of the second application have the benefit of the filing date of the first application which, in turn, antedates the reference.
 - (B) proper because the claim of the second application have no benefit of the filing date of the first application, and the article was published and the invention was offered for sale in the United States more than one year before the filing date of the second application.
 - (C) improper because the article constitutes an offer for sale of the chemical composition in Great Britain as well as in the United States.
 - (D) improper because the article is effective as a publication only after the filing date of the first application.
 - (E) proper because the article offers the chemical compositions for sale in Great Britain which, pursuant to GATT, is in this country for purposes of 35 U.S.C. § 102.

8. To comply with the statutory requirements for a specification in a U.S. patent application, the specification must include all of the following except:

- (A) The best mode contemplated by the inventor of carrying out his or her invention.
- (B) A written description of an actual reduction to practice of the claimed invention.
- (C) A written description of the invention.
- (D) The manner and process of making the invention.
- (E) The manner and process of using the invention.

9. X invented a compound Y useful for treating HIV patients. X attended a conference on AIDS in Chicago, Illinois on December 2, 1995, and gave an oral presentation specifically identifying compound Y and its method of use for treating HIV patients. An article was published in the *Chicago Tribune* newspaper on December 3, 1995, identically disclosing compound Y and its method of use for treating HIV, including teaching each and every element of compound Y. Neither X's paper nor the newspaper article disclosed how to make compound Y. X filed a patent application in the PTO on January 6, 1997, claiming compound Y. The examiner rejected the claim as being anticipated under 35 U.S.C. § 102(b) over the newspaper article in view of two U.S. patents issued in 1994. The patents teach methods of making compounds of the same general class of compounds as compound Y, and describe several methods by which compound Y can be made. The patents disclosed using the compounds disclosed therein to digest food. The rejection is _____

- (A) improper because it is never proper to use more than one reference in a 35 U.S.C. § 102 rejection.
- (B) improper in the absence of motivation to combine the references.
- (C) improper because the compounds in the patents and compound Y have different uses.
- (D) proper because the article describes compound Y, and the patents are evidence of what was in the public's possession before X's invention regarding how to make compound Y.
- (E) proper because the article describes compound Y, and the patents are superfluous inasmuch it is not necessary that the article describe how to make compound Y.

10. On January 7, 1997, practitioner P filed in the PTO a patent application wherein invention X is claimed. On January 8, 1997, practitioner S filed in the PTO a patent application wherein XY is the claimed invention. XY is disclosed in the later filed application to be an obvious improvement upon X. In which of the following situations would it be inappropriate for a provisional rejection of claims under 35 U.S.C. § 102(e)/103 to be made in the later filed patent application over the copending, earlier filed but issued patent application?

- (A) Neither of the copending applications contain a showing whether the applications have a common assignee, A is named as the inventor in the earlier filed application, and B is named as the inventor in the later filed application.
- (B) Neither of the copending applications contain a showing whether the applications have a common assignee, A is named as the inventor in the earlier filed application, and A and B are named as the inventors in the later filed application.
- (C) A is named as the inventor in the earlier filed application, A and B are named as the inventors in the later filed application, and the later filed application contains a showing that C is the common assignee of the two applications.
- (D) A is named as the inventor in the earlier filed application, B is named as the inventor in the later filed application, and the later filed application contains a showing that C is the common assignee of the two applications.
- (E) A is named as the inventor in the earlier filed application, A and B are named as the inventors in the later filed application, and the later filed application contains a showing that B is the common assignee of the two applications.

11. Which of the following is false regarding interviews?

- (A) Patent examiners are forbidden to hold interviews with an unregistered or disbarred attorney regarding a patent application, unless the attorney is the applicant.
- (B) A request for an interview on the merits prior to the filing of a first filed original patent application normally is permitted.
- (C) A request for an interview on the merits prior to a first action in a continuation or substitute application is ordinarily granted.
- (D) A complete written statement as to the substance of a face-to-face or telephone interview with regard to the merits of an application must be made of record in the application, whether or not agreement with the examiner has been reached.
- (E) If a registered practitioner, who is not an attorney or agent of record, seeks an interview and has in his or her possession a copy of the application filed, the examiner may accept the practitioner's statement that he or she is authorized to represent the applicant and may hold an interview with the registered practitioner.

12. On April 4, 1997, practitioner P filed a patent application for inventor S claiming a laminate of several layers. The examiner rejected the claims in the application as being anticipated under 35 U.S.C. § 102(a) and 102(e) over a U.S. patent granted on February 11, 1997, to Jones which describes the laminate in the specification, and how to make the laminate. Jones did not claim the laminate, or derive the laminate from S. The patent was granted to Jones on an application filed on November 2, 1994. The claims in the Jones patent are directed to a substrate having a single layer. S first conceived his invention on July 4, 1995. Which of the following would be (an) appropriate response(s) to overcome the rejection?

- (A) Amending the claim by adding limitations which are supported by the specification in S's application, and are not disclosed or suggested by the Jones patent, request reconsideration, and clearly point out the patentable novelty of the amended claim presented over Jones.
- (B) Produce evidence of secondary considerations such as unexpected results or commercial success.
- (C) Argue that the claimed invention in the Jones patent is non-analogous art or teaches away from the invention.
- (D) Argue that the Jones patent is not evidence that the invention was known "by others," as required by 35 U.S.C. § 102(a) since Jones is a single person, whereas "others" requires plural persons.
- (E) B and C.

13. Inventor Jones retained registered practitioner P to prepare and file a patent application claiming Jones' invention. P prepared and filed the application together with a declaration wherein Jones appointed P to represent him and conduct all business before the PTO. While P was away on a vacation, Jones filed a preliminary amendment in the application amending the claims, and no Office action on the merits was issued by the PTO examiner. The amendment was signed by Jones, but not P. When P returned from vacation, Jones provided P with a copy of the amendment. Upon review of the amendment, P realized that the scope of the claims had been broadened, that the broadened claims are supported by the original disclosure, and that the claims now read upon prior art which Jones disclosed to P, but which was not disclosed in the specification. The prior art reference is not material to the patentability of the original claims in the application. Which of the following actions of P accords with proper PTO practice and procedure and is the most likely to place the application in condition for allowance?

- (A) File a supplemental amendment arguing that the Jones amendment should not be entered on the ground that 37 CFR § 1.33 provides that "Double correspondence with an applicant and his attorney or agent . . . will not be undertaken."
- (B) File a supplemental amendment canceling all amendatory changes effected by the Jones amendment.
- (C) File a supplemental amendment which (1) cancels all the claims in the patent application, (2) adds the original claims, and (3) argues that the newly added claims are supported by the disclosure.
- (D) File a supplemental amendment which (1) adds the original claims, (2) cites to the examiner the prior art reference disclosed by Jones to P with an explanation of how the newly added claims patentably distinguish over such prior art reference, and (3) argues that the added claims are supported by the disclosure.
- (E) File a supplemental amendment which (1) adds the original claims, (2) cites to the examiner the prior art reference disclosed by Jones to P with an explanation of how all the claims in the application patentably distinguish over such prior art reference, and (3) argues that all the claims in the application are supported by the disclosure.

14. Applicant filed a patent application claiming a widget which included a "sluiced cotter pin" as a means for holding a wheel to a shaft. The specification contained no details of the sluiced cotter pin and such a pin was not commonly known in the art. However, the specification noted details of such a pin could be found in an article published in a particular issue of a popular magazine. The examiner objected to the specification on the ground that it improperly incorporated the material of the publication by reference. Which of the following actions would accord with proper PTO practice and procedure in overcoming the objection?

- (A) File an amendment enclosing a copy of the magazine article.
- (B) File an affidavit attesting to the fact that you have personally read the article and that the details of the pin are clearly set forth therein.
- (C) Amend the specification to include the material incorporated by reference.

- (D) File a declaration executed by a registered practitioner stating that the amendatory material consists of the same material incorporated by reference.
- (E) Amend the specification to include the material incorporated by reference, and accompany it with an affidavit stating that the amendatory material consists of the same material incorporated by reference.

15. Inventor Jones invented Y in the United States on November 5, 1995, and hired practitioner P to prepare and file a provisional application. On February 9, 1996, P filed a provisional patent application in the PTO. P received a Notice to File Missing Parts dated March 6, 1996, because the appropriate filing fee was not filed. The Notice set a period for response which was one month from the date of the Notice or two months from the filing date, whichever was later. The filing fee and required surcharge were not filed in the PTO. The provisional application became abandoned. A Notice of Abandonment, dated September 9, 1996, was duly received by P's secretary in P's office, and P's secretary placed the notice in Jones' file. On February 3, 1997, Jones furnished P with a copy of a publication by Gezer, dated February 2, 1996, fully describing Y, and its method of manufacture. On February 4, 1997, P reviewed the Jones file and found the two notices. To properly protect Jones' patent rights, the most appropriate course of action for P to take is to

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- (A) on or before Friday, February 7, 1997, file in the PTO a nonprovisional application claiming Y, and file a copy of the Gezer publication, and an explanation of the relevance of the Gezer publication.
 - (B) on Monday, February 10, 1997, file in the PTO a nonprovisional application claiming Y, and file a copy of the Gezer publication, and an explanation of the relevance of the Gezer publication.
 - (C) on or before Friday, February 7, 1997, file a nonprovisional application claiming Y and claiming benefit of the filing date of the provisional application under 35 U.S.C. § 119(e), and file the filing fee and surcharge for the provisional application along with the appropriate petition and fee to revive the provisional application, a statement by P that the abandonment of the provisional application was unintentional, a copy of the Gezer publication, and an explanation of the relevance of the Gezer publication.
 - (D) on Monday, February 10, 1997, file a nonprovisional application claiming Y and claiming benefit of the filing date of the provisional application under 35 U.S.C. § 119(e), and file the filing fee and surcharge for the provisional application along with the appropriate petition and fee to revive the provisional application, a statement by P that the abandonment of the provisional application was unintentional, a copy of the Gezer publication, and an explanation of the relevance of the Gezer publication.
 - (E) on Friday, February 7, 1997, file a continuation provisional application claiming the benefit of the filing date of the February 9, 1996, provisional application. For the February 9, 1996, provisional application, file the filing fee and surcharge, the appropriate petition and fee to revive the provisional application, a statement by P that the abandonment of the provisional application was unintentional, a copy of the Gezer publication, and an explanation of the relevance of the Gezer publication.

16. A and B jointly invent a process for refining corn oil and they file a *pro se* patent application on the process on November 17, 1995. Shortly afterwards, A and B are hired by XYZ Corporation, a processor and distributor of vegetable oils. During the pendency of their patent application, on January 3, 1997, A and B jointly invent an improvement to their corn oil process, and pursuant to their employment agreement, they execute an assignment of the improved process invention to their employer. You are patent counsel for XYZ Corporation, and pursuant to instructions, you prepare a patent application on the improved process invention. On February 3, 1997, you file the patent application together with the executed assignment in the PTO. The first sentence of the improvement specification states that this application is a C-I-P of the copending *pro se* A and B patent application, which is adequately identified therein. On May 2, 1997, the *pro se* A and B patent application, becomes abandoned, and on June 2, 1997, all the claims in the improvement application, all of which are directed to the improved process, are rejected by the examiner as unpatentable under 35 U.S.C. § 103 over a U.S. patent that issued on March 4, 1997, on an application that was filed on December 11, 1995. Which of the following actions accords with proper PTO practice and procedure, and represents the most appropriate action for overcoming the examiner's rejection?

- (A) File a response which argues that the claims of the present application are nonobvious over the U.S. Patent issued on May 4, 1997.
- (B) File a response which argues that since A and B are the same inventors named in the previously filed *pro se* application and since the C-I-P application contains a specific reference to the earlier filed application, the present application is entitled to the benefit of the earlier filing date in accordance with 35 U.S.C. § 120 for purposes of the improvement process claims.
- (C) File a Rule 132 affidavit offering test data showing that the C-I-P process is significantly superior to the *pro se* process.
- (D) File a response which argues that the reference patent cannot be the basis of a rejection because its issue date postdates the filing date of the C-I-P application.
- (E) File a Rule 131 affidavit swearing back of the reference filing date.

17. Your client informs you that he has filed an international application in the United States and he wishes you to file the U.S. national stage prior to the 30 month deadline for filing the national stage in the U.S. which ends September 2, 1997, next Tuesday. Which of the following actions should you take on that date prior to midnight to obtain the benefit of the international filing date?

- (A) File a copy of the application in PTO with a cover letter indicating that this is a new application and requesting a filing date.
- (B) File a paper with the PTO identifying the international application and asking that the PTO send you a bill you for the US national filing fee.
- (C) File the oath or declaration only since that is all that is required for entry into the US national stage.

- (D) File a request to enter the national stage with the PTO identifying the international application and asking that the US national filing fee be deducted from your deposit account.
- (E) File a request that the International Bureau send all the necessary papers and the fee to the PTO.

18. C, a registered patent agent, has just received a final rejection of all of the claims in an application directed to an article of manufacture. C files a Notice of Appeal to the Board of Patent Appeals and Interferences. Nevertheless, he would like to tie up some loose ends by amendment before filing his appeal brief. Which of the following responses may he file without triggering the requirements of 37 CFR § 1.116(b)?

- (A) A response that presents his argument in a more defensible light and adds additional claims.
- (B) A response amending the claims into process claims.
- (C) A response complying with a formal requirement of the examiner.
- (D) A response amending all of the independent claims, accompanied by a declaration from the inventor.
- (E) (A) and (D).

19. In a drawing for a design patent application, broken lines may be properly used to show:

- (A) A less important aspect of the claimed design.
- (B) Hidden planes and surfaces which cannot be seen through opaque materials.
- (C) Indicia, lettering, or other ornamentation which is part of the claimed design embodied in the article of manufacture.
- (D) Structure that is not part of the claimed design, but is considered necessary to show the environment in which the article of manufacture is used.
- (E) (C) and (D) are correct.

20. Which of the following constitutes a proper method of service to an unrepresented applicant of papers in a protest of an application?

- (A) Transmission by first class mail to the applicant.
- (B) Personally delivering a copy to the applicant.
- (C) Leaving a copy at the usual place of business of the applicant with someone in the applicant's employment.
- (D) When there is no usual place of business by leaving a copy at the applicant's home with someone of suitable age and discretion who resides there.
- (E) All of the above.

21. Which of the following is a printed publication under 35 U.S.C. § 102(a) which may be used to defeat the patentability of an invention conceived and reduced to practice in Des Moines, Iowa, on December 14, 1996?

- (A) A doctoral thesis shelved at a California university library, indexed only by subject, and cataloged in the library card catalog on June 15, 1996.
- (B) A doctoral thesis shelved at a California university library and indexed only by graduating class prior to December 13, 1995.
- (C) A doctoral thesis orally presented to members of a California university graduate committee prior to December 13, 1995.
- (D) An oral presentation of research to members of the public in England on December 13, 1995.
- (E) None of the above.

22. In interference practice, which is/are necessary elements for a preliminary motion seeking to designate an application or patent claim to correspond to a count?

- (A) Identifying the claim and the count.
- (B) Showing that the claim defines the same patentable invention as the count.
- (C) The fee for the preliminary motion.
- (D) All of the above.
- (E) (A) and (B).

23. Your client, A, has assigned his original patent application covering a golf club with an elliptical shaft to his wholly-owned company, Golf, Inc. Since that time, A has filed a continuation-in-part application which claims priority under 35 U.S.C. § 120 from his original application. The subject matter of the continuation-in-part application includes a golf club with an elliptical shaft having dimples on the shaft. The dimples on the shaft decrease the wind resistance and enable golfers to generate more club-head speed and hit golf balls greater distances. A has recently discovered that a competitor, Sports, Inc., has begun selling golf clubs with an elliptical shaft having dimples on the shaft. A wants his company to bring suit against Sports, Inc. for patent infringement as soon as the patent issues on the continuation-in-part application. To insure that Golf, Inc. owns the rights in the patent that issues from the continuation-in-part application, you should:

- (A) Do nothing because the assignment recorded against the original application gives Golf, Inc. the rights to the subject matter in the continuation-in-part application.
- (B) Do nothing because Golf, Inc. is wholly-owned by A.
- (C) Do nothing because the assignment recorded against the original application gives Golf, Inc. the rights to the subject matter common to both the continuation-in-part and the original applications.

- (D) Prepare and file papers assigning the continuation-in-part application to Golf, Inc. because continuation-in-part applications require a new assignment if they are to be issued to an assignee.
- (E) List Golf, Inc. as assignee when the issue fee is paid.

24. Your client, D, from Sweden, has invented a new panacea for all geriatric diseases. He requests that you file a patent application for his new invention, and you immediately comply with his request. The application includes a signed declaration that D is the original and first inventor of his new panacea. Several months later, you receive the first Office Action on the application. The Office action indicates that the declaration signed by D is defective because it failed to set forth the country of which D is a citizen. The most appropriate response to the Office Action is:

- (A) Prepare and file a new declaration, complete with statements that D believes himself to be the original, first, and sole inventor of his new panacea, and that he is a citizen of Sweden.
- (B) Prepare and file an amendment to the declaration indicating that D is a citizen of Sweden.
- (C) Prepare and file a response to the Office action stating that D is a citizen of Sweden.
- (D) Petition the Commissioner under 37 CFR § 1.18 for a waiver of the requirement for a statement regarding citizenship, accompanied by the appropriate fee.
- (E) Either (A) or (B).

25. Alice invented a new pharmaceutical compound. You have prepared, filed, and prosecuted a patent application containing Claims 1 through 15 directed to the compound. All of the claims were finally rejected under 35 U.S.C. § 102(b) in view of the Leary patent. You appealed the final rejection and have received a decision from the Board of Patent Appeals and Interferences affirming the rejection of Claims 1 to 10 in view of Leary and reversing the rejection of Claims 11-15. However, the Board has entered a new ground of rejection of Claims 11 through 15 under 35 U.S.C. § 103 in view of the Garcia patent. Which of the following is/are correct response(s) to the Board's new ground of rejection?

- (A) File a request for reconsideration by the Board within one month of the date of the Board decision.
- (B) File a Notice of Appeal regarding the Board's decision respecting claims 1-5 with the U.S. Court of Appeals for the Federal Circuit within 60 days of the date of the decision.
- (C) Submit an amendment to the Examiner that amends Claims 11-15 to avoid the Garcia reference, along with an affidavit providing evidence of the non-obviousness of the claimed compound compared to the compound disclosed by Garcia, within the appropriate time period set in the Board Decision.
- (D) Submit an amendment to the examiner amending claim 1 to define over Leary and amending Claims 11-15 to define over the Garcia patent.
- (E) Both (A) and (C) are correct.

26. V has invented a new composition for stabilizing and preserving blood products. On October 30, 1992, V filed a patent application in the PTO for his composition. The specification discloses that the composition includes: 10 to 40 percent active component, preferably 20 to 35 percent active component; 5 to 20 percent preservative, preferably 10 to 15 percent preservative; and 40 to 85 percent water, preferably 50 to 70 percent water. The patent issued on April 5, 1994, with the following single claim:

1. A blood preservative composition comprising 20 to 30 percent active component; 5 to 20 percent preservative; and 40 to 85 percent water.

On the evening of March 31, 1996, you receive a telephone call from V. In reviewing his patent, he has discovered an error in the patent that occurred without deceptive intent. He wants you to prepare a reissue application and make the following amendment to Claim 1 and add two claims.

- I. 1. A blood preservative composition comprising [20] 10 to [30] 40 percent active component; 5 to 20 percent preservative; and 40 to 85 percent water.
- II. 2. The blood preservative composition of Claim 1, wherein the composition comprises 10 to 15 percent preservative.
- III. 3. A blood preservative composition comprising 20 to 35 percent active component; 10 to 15 percent preservative; and 50 to 70 percent water

You prepare and file the reissue application on April 1, 1996. Which of the above claims is/are proper in the reissue application?

- (A) I.
- (B) II.
- (C) I and II.
- (D) II and III.
- (E) I, II, and III.

27. Which of the following elements are necessary to obtain an international filing date for an application filed under the Patent Cooperation Treaty?

- I. An oath or declaration of the inventor.
 - II. The correct filing fee.
 - III. A part which appears on its face to be a description.
 - IV. A part which appears on its face to be a claim.
 - V. The designation of at least one PCT Contracting State.
- (A) I, II, and III.
 - (B) II and III.
 - (C) II, III, and V.
 - (D) III, IV, and V.
 - (E) III and IV.

28. Inventor Jones received a patent that, through error and without deceptive intent, failed to disclose an embodiment of the invention. Eighteen months later, Jones asks whether a reissue application may be filed. Jones also tells you that the original patent with the blue ribbon seal has been lost. Your advice to Jones should include:

- (A) under 35 U.S.C. § 251, new matter cannot be added to a reissue application.
- (B) any added claims to the new embodiment would not satisfy 35 U.S.C. § 112.
- (C) under 35 U.S.C. § 251, it is too late to enlarge the scope of the issued claims in a reissue application.
- (D) under 35 U.S.C. § 251, Jones cannot get a reissue of a patent that has been lost.
- (E) (A) and (B).

29. You have filed a complete plant patent application claiming 1) a distinct and new plant variety and 2) a method for obtaining the plant variety. Which of the following statements is/are false?

- I. You may not amend the application to add additional description of the plant variety inadvertently omitted from the original application.
 - II. You may be required to deposit an adequate sample of the plant variety with an acceptable depository and the claims may be rejected under 35 U.S.C. § 112 without the deposit.
 - III. You may be required to restrict the claims between plant variety and plant method inventions you want examined for ultimate issuance as the single claim in the plant patent application to which you are entitled.
- (A) III.
 - (B) II and III.
 - (C) I and II.
 - (D) I and III.
 - (E) I, II, and III.

30. Banana, Inc. wishes to cite a prior art reference, consisting of a patent, to the PTO to be entered into the file of an issued patent owned by Orange, Inc. Which of the following is necessary to ensure that the prior art reference is entered into the patent file?

- (A) Banana's citation of the reference must be accompanied by an explanation of the pertinency and manner of applying the reference to at least one of the claims of the patent.
- (B) The term of the patent must not have expired.
- (C) The reference must present a substantial new question of patentability.
- (D) Banana's citation of the reference must be accompanied by the appropriate fee.
- (E) Both (B) and (C).

31. Which one of the following statements about multiple dependent claims is correct?

- (A) The total number of claims in a U.S. patent with one multiple dependent claim is two or more claims and one of the claims must be an independent claim.
- (B) Multiple dependent claims cannot serve as a basis for another multiple dependent claim.
- (C) A multiple dependent claim cannot be objected to if at least one of the claims from which it depends is allowable.
- (D) If a utility patent application is filed without multiple dependent claims, it cannot thereafter be amended, consistent with 37 CFR § 1.75, to include any multiple dependent claims.
- (E) The total filing fees paid for a patent application, filed with one or more multiple dependent claims is identical to the total filing fees paid for a patent application filed with the same claims written so that they are not in multiple dependent form.

32. On April 7, 1994, applicant filed an international patent application under the Patent Cooperation Treaty (PCT) in the European Patent Office (EPO). The international application was in the French language and the United States was designated in accordance with Article 4 (1)(ii) in the application. The application claimed priority of an earlier French national application filed on April 14, 1993. The International Search Report was issued by the EPO on September 29, 1994. A copy of the international application was communicated to the PTO under Article 20 of the PCT on October 27, 1994, the same day the International Application was published by the World Intellectual Property Organization. A Demand for international preliminary examination, in which the United States was elected, was properly filed on November 2, 1994. The EPO issued the International Preliminary Examination Report, which was accompanied by an Annex, on July 10, 1995. The applicant filed in the PTO, the basic national fee to enter the national phase in the United States on September 6, 1995, and a translation of the international application on September 18, 1995. On January 16, 1996, the PTO sent the applicant a notice which required the oath or declaration of the inventor to be furnished within a one month period. The applicant filed in the PTO a proper declaration of the inventor on January 29, 1996, and an English translation of the Annex to the International Preliminary Examination Report on February 2, 1996. The declaration and translation of the Annex were both accompanied by the necessary fees. The United States national phase application issued as a patent on July 16, 1996. The USPTO examiner has cited the issued patent as a prior art reference under 35 U.S.C. § 102(e). What is the effective date of the Patent as a reference under 35 U.S.C. § 102(e)?

- (A) October 27, 1994.
- (B) September 6, 1995.
- (C) September 18, 1995.
- (D) January 29, 1996.
- (E) February 2, 1996.

33. P files a patent application claiming a process for lubrication at a high temperature using a mixture of compounds X and Y. The process may be used in high speed aircraft. Included in the specification are test data supporting the high temperature lubricating utility of the mixture. In the first Office action, the examiner rejects all the claims as being anticipated by a prior art publication from 1900 which discloses a mixture of compounds X and Y and reveals test data at ambient temperature which supports the position that the mixture of compounds X and Y has poor lubricating properties. Which of the following arguments accords with proper PTO practice and procedure and represents the best chance for overcoming the rejection?

- (A) Argue that the claims required lubricating at high temperature and the prior art does not teach the use of compounds X and Y as a lubricant at high temperature and therefore the rejection was improper.
- (B) Argue that the lubricant is intended for use with high speed aircraft, and that the reference publication issued long before high speed aircraft came into existence.
- (C) Argue that the fact that your test data demonstrates good lubrication properties for a mixture of compounds X and Y and the fact that the reference's test data demonstrates poor lubrication properties for a mixture of compounds X and Y is clear and convincing evidence that your claims are patentable thereover.
- (D) Argue that the reference publication is more than 75 years old, and that technological processes for preparing the mixture of compounds X and Y were archaic at the time, and that in all probability the test data in the reference publication was obtained with a contaminated specimen.
- (E) Argue that although not expressly disclosed in your application, your invention and the reference publication relate to different forms of compound X.

34. The following claims are included in a newly filed patent application:

Claim No.

- 1. Independent
- 2. Dependent on claim 1
- 3. Dependent on claim 1
- 4. Dependent on claim 2 and 3
- 5. Independent
- 6. Dependent on claim 1,2, or 5
- 7. Dependent on claim 6

Which of the following represents the proper number of total claims for fee calculation purposes?

- (A) 10
- (B) 9
- (C) 11
- (D) 7
- (E) 8

35. An application for an improved gizmo was filed by attorney X in the PTO on March 3, 1997. The declaration and power of attorney was signed by joint inventors A and B. A and B work for company Z. No assignment has been filed in the application. C, who also works for company Z became aware of the application filed in the PTO on March 3, 1997, and wants to inspect the application since C believes that she should also be named as a joint inventor in the application. You are a registered patent agent with an office in Washington, D.C. On June 2, 1997, C visits your office and hires you as her agent. Your client, C, informs you that she wants to inspect the application filed in the PTO on March 3, 1997. C also informs you that the application was filed in the names of A and B and that the invention is for an improved gizmo. Which of the following would be the most appropriate advice to give to your client?

- (A) That C may inspect the application if she can get written permission from company Z.
- (B) That C may inspect the application immediately since she knows the filing date of the application and needs only the permission of the primary examiner in charge of the application.
- (C) That only you, acting as her agent, would be permitted to inspect the application.
- (D) That C may inspect the application if she can get written permission from attorney X.
- (E) (A) and (D) only.

36. You, a patent practitioner, receive a final rejection from the examiner allowing claims 2, 3, and 5 and rejecting claims 1 and 4. Which of the proposed responses below would be entered by the examiner as the applicant's matter of right?

- (A) An amendment canceling claims 1 and 2 and adding a new claim 6.
- (B) An amendment canceling claim 4 only.
- (C) An amendment canceling claims 1 and 4 and adding new claims 6 and 7.
- (D) An amendment amending claim 4 and canceling claim 1.
- (E) An amendment canceling claims 1 and 4 and amending claims 2 and 3.

38. You are a sole practitioner prosecuting a patent application for your client. You received a final rejection dated June 2, 1997. You believe that the examiner's final rejection is unsound. On July 1, 1997, you advised your client to appeal to the Board of Patent Appeals and Interferences. On July 15, 1997, your client informs you that she plans to obtain a new representative and you are to take no further action on the application. Thereafter, you mail to the PTO by "Express Mail" a request for withdrawal, a certificate of mailing by "Express Mail", and a postage-paid self-addressed card of receipt itemizing these two items. Actual withdrawal occurs:

- (A) On the day that you "express mail" the request for withdrawal, certificate of mailing by "Express Mail" and receipt card.
- (B) On the day that the Office received your application for withdrawal as identified on the receipt card that was returned to you.
- (C) On the day your client informed you she was obtaining a new representative.
- (D) On the day that the Office approves your request for withdrawal.
- (E) On the day that you receive the receipt card sent back to you by the Office.

39. An application received a first Office action from the examiner, dated March 18, 1996. A shortened statutory period for response was set at three months. Applicant filed a response on June 22, 1996. No fee or petition for extension of time accompanied the response. On June 28, 1996, applicant received a letter from the examiner indicating that the response of June 22, 1996 was not acceptable since no fee and petition for extension of time was submitted. If applicant submits a petition and fee to the PTO on July 22, 1996, how many month(s) must be covered by the fee?

- (A) Five months.
- (B) Two months.
- (C) Four months.
- (D) Three months
- (E) One month.

40. Kent, an inventor, filed a patent application in the PTO and received a filing date of June 14, 1995, on a supersonic krypton diffuser. On October 17, 1995, Mr. Kent filed an Information Disclosure Statement (IDS). On October 28, 1995, Mr. Kent received an Office action from the examiner dated October 19, 1995, allowing Claims 1-5, the only claims in the application. What action must Mr. Kent take to have the IDS considered by the examiner?

- (A) Submit a certification under 37 CFR § 1.97 and a fee.
- (B) Submit a certification under 37 CFR § 1.97 only.
- (C) Submit a certification under 37 CFR § 1.97, petition, and petition fee.
- (D) Submit a petition and petition fee.
- (E) None of the above.

41. Applicant files an application with the PTO on January 4, 1997, which is granted special status. The application is taken up out of turn, and a Notice of Allowance is mailed on April 15, 1997. Applicant files an Information Disclosure Statement on April 21, 1997, citing prior art that he has become aware of since the application was filed. The disclosure document will:

- (A) Be considered because the application was granted special status.
- (B) Be considered because it was received by the PTO within three months of filing.
- (C) Be considered because it was filed within a 3 month shortened statutory period of the Notice of Allowance.
- (D) Be considered because the applicant has not received the Notice of Allowance mailed on April 15th, when the IDS was issued.
- (E) Be considered if accompanied by a certification, petition and the appropriate fee.

42. Applicant filed a patent application in the PTO on January 30, 1997. The application was based on an application for an inventors' certificate filed in country X on January 31, 1996. The laws of country X permit applicants to apply, at their discretion, either for a patent or for an inventors' certificate, and country X is a signatory of the Stockholm Revision of the Paris Convention. In the first Office action, the examiner rejected applicant's claims as anticipated by a reference with an effective date of November 6, 1996. To overcome the rejection applicant is required to:

- (A) File a copy of the foreign application for inventor's certificate together with an English translation of the papers.
- (B) File a copy of the foreign application for inventor's certificate showing the date of the application.
- (C) File a claim for a right of priority based upon the foreign application for inventor's certificate together with an English translation of the papers.
- (D) File a claim for a right of priority based upon the foreign application for inventor's certificate along with a certified copy of the foreign application, and an English translation of the papers.
- (E) The rejection cannot be overcome because the right of priority must be based upon an application for patent in a foreign country, rather than an application for an inventors' certificate.

43. On May 8, 1996, John Doe filed a first patent application containing claims to invention X and invention Y. In the first Office action, the examiner required restriction to one of the inventions. Doe elected to prosecute invention X. In the second Office action, the examiner rejected the claims to invention X as unpatentable over prior art. Following an interview with the examiner, Doe successfully persuaded the examiner that his claims distinguished over the prior art. The application issued as a patent on May 6, 1997. On May 7, 1997, Doe filed a second application claiming only invention Y. Which of the following is true?

- (A) The patent issuing on the first application may not be used as a reference against the second application because the latter resulted from a restriction requirement.
- (B) The patent issuing on the first application may be used as a reference against the second application because the latter was filed after the patent issued.
- (C) The patent issuing on the first application may not be used as a reference against the second application because the latter was filed within 1 year of the filing date of the first application.
- (D) The patent issuing on the first application may not be used as a reference against the second application because inventions X and Y are independent and distinct inventions as evidenced by the requirement for restriction and were originally claimed in the same application.
- (E) The second application is entitled to the benefit of the earlier filing date of the first application.

44. Which of the following files are not open to the public?

- (A) Interference files involving an issued patent where the interference has been terminated.
- (B) Papers relating to a reexamination proceeding which have been entered of record in a reexamination file.
- (C) Assignment records relating only to pending patent applications.
- (D) Assignment records relating to issued patents.
- (E) An assignment record relating to a pending patent application and an issued patent.

45. Which of the following statements is true?

- (A) Where all of the members of a law firm are of record in a patent application, withdrawal can only be accomplished by filing a request for withdrawal signed by all the members of the law firm.
- (B) A registered practitioner not of record in a patent application is afforded the privilege of filing papers in the application provided such papers bear the signature and registration number of the practitioner.
- (C) If an attorney is suspended from practice before the Office as a result of a disciplinary proceeding involving a patent matter, he or she can still represent trademark applicants before the Office.
- (D) On January 3, 1993, the Commissioner excluded X and suspended Y for 1 year from practice before the PTO. On January 6, 1997, both X and Y filed petitions for reinstatement. The Commissioner will consider both petitions.
- (E) (B) and (D).

46. Inventors X and Y jointly conceive and reduce to practice an invention. Subsequently, in the course of determining how best to commercially exploit the invention, they have a “falling out” and decide to go their own ways. Inventor X decides to obtain patent protection for the invention, but inventor Y refuses to join in any application. Which of the following actions accords with proper PTO practice and procedure?

- (A) Inventor X should file an application for patent as sole inventor accompanied by X’s affidavit as to the pertinent facts.
- (B) An application for patent should be filed in the names of inventor X and inventor Y as joint inventors, but the filing fee should be allocated between them, with the rights of the inventors under any issuing patent being contingent on payment of the allocated fee.
- (C) Inventor X should file an application for patent on behalf of himself and inventor Y and provide proof of the pertinent facts relating to inventor Y’s refusal to join in the application.
- (D) Inventor X should file an application for patent as sole inventor documenting inventor Y’s refusal to join in the application, and requesting that inventor Y be barred thereafter from joining in the application.
- (E) Inventor X should file an application for patent as sole inventor documenting inventor Y’s refusal to join in the application, and requesting that inventor Y be barred from those patent rights which he would have had if he had been joined.

47. You file a patent application on behalf your client, a small company, claiming a cleaning solution wherein uric acid is the primary ingredient. You received an Office action dated August 19, 1997, wherein all the claims were rejected under 35 U.S.C. § 112. You provided your client with a copy of the Office action. Today, August 27, 1997, the President of the client called and informed you that the company wants to keep the composition of the uric acid-containing cleaning solution a trade secret. The President informed you that the company has developed another cleaning solution composition wherein sulfuric acid is the primary ingredient, and uric acid is not present. The President also informed you that the sulfuric acid-containing cleaning solution is better able to clean than the uric acid-containing cleaning solution. The use of sulfuric acid was not disclosed in the pending application. Which of the following is in accord with PTO practice and procedure to obtain patent protection for the sulfuric acid-containing cleaning solution and maintain the confidentiality of the uric acid-containing cleaning solution?

- (A) Abandon the pending application, and file a new patent application disclosing and claiming only the sulfuric acid-containing cleaning solution wherein sulfuric acid is the primary ingredient. The new application should not refer back to the previous, pending application.
- (B) File a continuation-in-part application disclosing and claiming the sulfuric acid-containing cleaning solution wherein sulfuric acid is the primary ingredient. The first sentence of the specification of the continuation-in-part application should refer to the previously filed, copending application.

- (C) File an amendment in the pending application adding claims to the sulfuric acid-containing cleaning solution wherein sulfuric acid is the primary ingredient.
- (D) File a reissue application on the pending application and broaden the claims in the reissue application to be inclusive of the sulfuric acid-containing cleaning solution wherein sulfuric acid is the primary ingredient.
- (E) File an amendment in the pending application directing that the word "uric" be replaced with the word "sulfuric" wherever "uric" occurs in the specification and claims.

48. What would be permitted to be incorporated by reference in your client's U.S. utility patent application?

- (A) Essential material from a commonly assigned, previously filed patent application, pending in a foreign country on the filing date of your client's domestic utility patent application.
- (B) Essential material from a pending U.S. application.
- (C) Non-essential material from an unpublished foreign patent.
- (D) Essential material from a non-patent publication, published in the U.S., which was published prior to the filing date of your client's domestic utility patent application.
- (E) An oath filed in another commonly assigned patent where the patent had the same inventor and the same assignee.

49. In response to a final rejection dated February 4, 1997, with a three month shortened statutory period for response, you call the examiner in charge of the patent application to schedule a first interview on July 3, 1997, to discuss further narrowing the scope of claim limitations. Your request for an interview should be _____

- (A) denied because your request is after the expiration of the shortened statutory period for response.
- (B) granted only if applicant pays the extension fee for the expired time.
- (C) granted.
- (D) denied because interviews are not permitted after the final Office action.
- (E) granted only if you have a proposed amendment and pay the extension fee.

50. Which, if any, of the following claim language is definite with respect to the scope of a claim?

- (A) . . . R is a strong reactant, for example, chlorine.
- (B) . . . material like wool or acrylic.
- (C) . . . lighter hydrocarbon, for instance, the vapors or gases produced.
- (D) . . . normal process conditions, such as ambient temperature.
- (E) None of the above.

**U.S. DEPARTMENT OF COMMERCE
UNITED STATES PATENT AND TRADEMARK OFFICE
REGISTRATION EXAMINATION
FOR PATENT ATTORNEYS AND AGENTS**

August 27, 1997

Afternoon Section (100 Points)

Time: 3 Hours

DIRECTIONS

This section of the examination is an open book examination. You may use books, notes, or other written materials that you believe will be of help to you *except* you may not use prior registration examination questions and/or answers. Books, notes or other written materials containing prior registration examination questions and/or answers *cannot* be brought into or used in the room where this examination is being administered. If you have such materials, you must give them to the test administrator before this section of the examination begins.

All questions must be answered in the appropriate SECTIONS 1 through 6 of the Answer Sheet which is provided to you by the test administrator. You must use a No. 2 (or softer) lead pencil to record your answers on the Answer Sheet. Darken *completely* the circle corresponding to your answer. You must keep your mark within the circle. Erase *completely* all marks except your answer. Stray marks may be counted as answers. No points will be awarded for incorrect answers or unanswered questions. Questions answered by darkening more than one circle will be considered as being incorrectly answered.

This section of the examination consists of THREE PARTS. PART 1 has fifteen (15) true/false questions, each worth one (1) point; PART 2 has twenty-nine (29) multiple choice questions, each worth two (2) points; and PART 3 has four (4) OPTION SECTIONS of fact patterns, each containing three (3) questions, each question worth three (3) points. Do not assume any additional facts not presented in the questions. For true/false questions of PART 1, please darken (A) if true or (B) if false. Darkening of (C), (D), or (E) for a true/false question will result in the answer being wrong. Regarding multiple choice questions of PARTS 2 AND 3, where choices (A) through (D) are correct and choice (E) is "All of the above," the last choice (E) will be the most correct answer and the only answer which will be accepted. Where two or more choices are correct, the most correct answer is the answer which refers to each and every one of the correct choices. Where a question includes a statement with one or more blanks or ends with a colon, select the answer from the choices given to complete the statement which would make the statement *true*. Also for PART 3, you are to choose ONLY three of the four OPTION SECTIONS to answer. When answering each question, unless otherwise stated, assume that you are a registered patent practitioner. Any reference to a practitioner is a reference to a registered patent practitioner. The most correct answer is the policy, practice, and procedure which must, shall, or should be followed in accordance with the U.S. patent statutes, the PTO rules of practice and procedure, the Manual of Patent Examining Procedure (MPEP), and the Patent Cooperation Treaty (PCT) articles and rules, unless modified by a subsequent court decision or a notice in the *Official Gazette*. There is only one most correct answer for each question. Unless otherwise explicitly stated, all references to patents or applications are to be understood as being U.S. patents or regular (non-provisional) utility applications for utility inventions only, as opposed to plant or design applications for plant or design inventions. Where the terms "USPTO," "PTO," or "Office" are used in this examination, they mean the U.S. Patent and Trademark Office.

You may write anywhere on this examination booklet. However, do not remove any pages from the booklet. Only answers recorded in SECTIONS 1 through 6 of your Answer Sheet will be graded. YOU MUST SCORE AT LEAST 70 POINTS TO PASS THE AFTERNOON SECTION OF THE REGISTRATION EXAMINATION.

DO NOT TURN THIS PAGE UNTIL YOU ARE INSTRUCTED TO

AFTERNOON SECTION

The Afternoon Section has been divided into **THREE PARTS**.

PART ONE consists of **SECTION 1** having 15 true/false questions. Each question is worth one point, and **SECTION 1** is worth a total of 15 points. Record your answers in **SECTION 1** of your Answer Sheet in the line having a number corresponding to the question being answered.

PART TWO consists of **SECTION 2** having 29 multiple choice questions. Each question is worth two points, and **SECTION 2** is worth a total of 58 points. Record your answers in **SECTION 1** of your Answer Sheet in the line having a number corresponding to the question being answered.

PART THREE consists of four **OPTION SECTIONS** identified as **OPTION SECTION 3**, **OPTION SECTION 4**, **OPTION SECTION 5**, and **OPTION SECTION 6**. Each of the four **OPTION SECTIONS** consists of a fact pattern followed by three questions based on the facts. Each question is worth three points, and **PART THREE** is worth a total of 27 points. Select three of the four **OPTION SECTIONS**, and answer all the questions in the three selected **OPTION SECTIONS**. If you choose to answer the questions in **OPTION SECTION 3**, record all of your answers in **SECTION 3** of your Answer Sheet in the line having a number corresponding to the question being answered. If you choose to answer the questions in **OPTION SECTION 4**, record all of your answers in **SECTION 4** of your Answer Sheet in the line having a number corresponding to the question being answered. If you choose to answer the questions in **OPTION SECTION 5**, record all of your answers in **SECTION 5** of your Answer Sheet in the line having a number corresponding to the question being answered. If you choose to answer the questions in **OPTION SECTION 6**, record all of your answers in **SECTION 6** of your Answer Sheet in the line having a number corresponding to the question being answered. If answers are marked in **SECTIONS 3, 4, 5, and 6** of the Answer Sheet, only the answers in **SECTIONS 3, 4, and 5** will be accepted, and the answers in **SECTION 6** will not be accepted.

PART 1: TRUE/FALSE

DIRECTIONS: Each correct answer is worth one point. No points are awarded for incorrect or unanswered questions. The questions must be answered in **SECTION 1** of the Answer Sheet. Please darken the "A" circle on your Answer Sheet if the answer to the question is *true*, and the "B" circle if it is *false*. Do not darken circles having "C," "D," or "E" in them.

1. A claim in the application as filed is indefinite which initially refers to "a screw" when the only basis for "a screw" is shown in the original application drawings, and the scope of the claim is ascertainable by one skilled in the art.
2. Where a range of "35 mg - 80 mg," and specific examples of "40 mg" and "65 mg" are described in the original specification which was filed with a declaration under 37 CFR § 1.63, and an amendment changing the numerical range in a claim from "35 mg - 80 mg" to "at least 42 mg" is filed after the application is filed, the amended claim is supported by the written description in the original specification.
3. The specification and claims of a utility patent application, as filed, do not describe a scanning device as having a specific angular view which is essential or critical to the invention. The generic claims in the application are amended for non-prior art reasons to limit the scanning device to having a specific angular view, and a patent is granted with the generic claims drawn to a scanning device having a specific angular view. A reissue application removing the limitations directed to the specific angular view is properly broadened and supported when filed by the same applicant one year after the patent issued.
4. A claim in the application as filed is definite when it refers to not only a broad numerical range, but also to a preferred narrow range that falls within the broader range in the same claim, such as when referring to "a pH range between 7 and 12, preferably between 9 and 10."
5. The scope of enablement required to support claims in a patent application varies inversely to the degree of predictability involved, but even in unpredictable arts, applicant needs to disclose every operable species.

6. Where a range of "10 psi to 50 psi," and a specific example of "42 psi" are described in the original specification which was filed with a declaration under 37 CFR § 1.63, and an amendment changing the numerical range in a claim from "10 psi to 50 psi" to "between 35 psi and 45 psi" is filed after the application is filed, the amended claim is supported by the written description in the original specification.
7. Publications dated after the filing date of an application providing information or the current state of the art first publicly disclosed after the filing date can supplement the disclosure in the application to make the disclosure enabling where the application did not disclose how to make or use the claimed invention, and claims in the application should not be rejected under 35 U.S.C. § 112, first paragraph, for lack of an enabling disclosure.
8. A claim in the application as filed is indefinite when a Markush expression is introduced by the term "comprising," for example, "R is selected from the group comprising A, B, C, and D."
9. Claims in a reissue application amended to omit the "in synchronism" limitation in the original patent disclosure and thereby permit the claimed invention to have scanning means and indexing means not "in synchronism" are not supported by the original disclosure in the patent application describing the invention as having only scanning means and indexing means "in synchronism."
10. Publications dated after the filing date of an application may not be used by the patent examiner to support a rejection under 35 U.S.C. § 112, first paragraph, that the application does not provide an enabling disclosure which is commensurate in scope with the claimed invention.
11. A claim in the application as filed is definite which initially refers to "an aluminum lever," and "a plastic lever" and thereafter refers to "said lever".
12. Only one example in the specification of an application may provide enablement commensurate with the scope of the claims in the application, and if such enablement is provided, the claims should not be rejected under 35 U.S.C. § 112, first paragraph, for lack of an enabling disclosure.

13. Disclosure of a specific utility of an invention and disclosure of a credible basis supporting the specific utility do not provide a basis for concluding that the requirements of 35 U.S.C. § 112, first paragraph, have been met where one of ordinary skill in the art must engage in undue experimentation to actually practice the invention.
14. A claim in the application as filed is definite which initially refers to "the lever," or "said lever" when the claim contains no earlier recitation or limitation to a lever, and it is unclear as to what element the limitation is referencing.
15. Claims in a U.S. patent application directed to a broad genus of painkillers with numerous variations are not supported by a foreign priority application where the foreign priority application discloses only two species of painkillers within the broad genus, and not the broad genus *per se*.

PART 2: MULTIPLE CHOICE

DIRECTIONS: Each correct answer is worth two (2) points. No points are awarded for incorrect or unanswered questions. The questions must be answered in **SECTION 2** of the Answer Sheet.

1. Applicant filed a patent application claiming a polyol. The application discloses that the claimed polyol is used to form rigid polyurethane foam having structural formula Z. The examiner properly rejected the claims as unpatentable over prior art disclosing the claimed polyol and its use to form rigid polyurethane foam having structural formula Z. Given the fact that applicant's specification discloses that the polyol may be produced by a process comprising steps A, B, C, and D, and such process is novel and unobvious, which of the following claims, if introduced by amendment, would overcome the rejection?

- (A) A polyol having the property of forming rigid polyurethane foam having structural formula Z, the polyol being produced by the process comprising the steps A, B, C, and D.
- (B) A polyol produced by the process comprising the steps A, B, C, and D, said polyol having the property of forming rigid polyurethane foam having structural formula Z.
- (C) A polyol produced by the process comprising the steps A, B, C, and D.
- (D) A polyol comprising the resultant product of steps A, B, C, and D.
- (E) A polyol-producing process comprising steps A, B, C, and D, said process resulting in a polyol capable of forming rigid polyurethane foam having structural formula Z.

2. The specification of inventor B's patent application discloses an electrical circuit comprising, in series, (a) a DC current source capable of producing a variable current in the range of 5-25 amperes, preferably 10-20 amperes; (b) a fixed resistor in the range of 5-15 ohms, preferably 8-10 ohms, and (c) a fixed capacitor in the range of 3-8 μf , preferably in the range of 6-7 μf . The application includes the following four claims:

1. An electrical circuit comprising, in series, a 10-20 amperes DC current source of variable current, an 8-10 ohm resistor, and a 3-8 μf capacitor.
2. An electrical circuit according to Claim 1, wherein the resistor is a 5-10 ohm resistor.
3. An electrical circuit according to Claim 1, wherein the capacitor is a 6-7 μf capacitor.
4. An electrical circuit according to Claim 2, wherein the capacitor is a 3-8 μf capacitor, and the DC current source is a 10-20 amperes source.

A British patent, published three years before the effective filing date of B's patent application, discloses a single circuit consisting of, in series, a 12 ampere DC current source of variable current, a 3 μf capacitor, and a 9 ohm resistor. Which of the following statements regarding the claims is true?

- (A) Claim 1 is an improper independent claim because there is no support in the specification of B's application for the circuit to have "a 10-20 amperes DC current source of variable current."
- (B) Claim 2 is a proper dependent claim because Claim 2 depends from a preceding claim, and Claim 2 further restricts the scope of the claim from which it depends.
- (C) Claim 3 is a proper dependent claim because it depends from a preceding claim, and because it narrows the scope of the claim from which it depends.
- (D) Claim 4 is a proper dependent claim because it further restricts the scope of the claim from which it depends.
- (E) Claims 1, 2, 3, and 4 are patentable over the British patent.

3. All of the following original claims are found in a single patent application. Claim 1 is an independent claim, and Claims 2, 3, 4, 7 and 9 each depend on Claim 1. Claim 6 is dependent on Claim 4. Claims 5, 8, 10, and 11 are multiple dependent claims which appear below. Which of the following contain permissible wording for proper multiple dependent claims?

- (A) 5. A widget as in either Claim 4 or Claim 6, wherein
- (B) 8. A widget as in Claim 5 or Claim 7, wherein
- (C) 10. A widget as in Claims 1-3, or 7-9, wherein
- (D) 11. A widget as in any one of Claims 1-4, 7, or 9, wherein
- (E) (C) and (D).

4. Patentee P wishes to amend Claim 1 in the patent granted to P, and obtain the following amended Claim 1 either through reexamination or reissue:

1. A ball valve comprising:

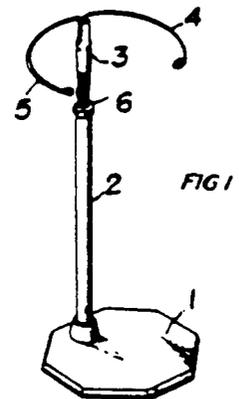
- i) a housing;
- ii) a valve [member] ball rotatably joined in the housing;
- iii) a [flanged] seal engagable with surfaces of the [member] ball; and
- iv) a linear spring [means] interposed between the housing and the seal and biasing the seal into engagement with the [member] ball.

The amended claim is supported by the original disclosure in the application which matured into P's patent. In the absence of questions of recapture, novelty, obviousness, and utility which of the following statements is true?

- (A) A claim so amended is properly presented in a reissue application filed on May 20, 1997, and a reissue patent is grantable where reissuance is sought of a patent granted on February 7, 1995.
- (B) A claim so amended is properly presented in a reissue application filed on May 20, 1997, and a reissue patent is grantable where reissuance is sought of a patent granted on June 6, 1995.
- (C) A claim so amended is properly presented in a request for reexamination filed on May 20, 1997, and a certificate of reexamination is grantable where reexamination is sought of a patent granted on February 7, 1995.
- (D) A claim so amended is properly presented in a request for reexamination filed on May 20, 1997, and a certificate of reexamination is grantable where reexamination is sought of a patent granted on June 6, 1995.
- (E) (B) and (D).

5. You draft a patent application disclosing and describing an adjustable doll stand shown in the drawing to the right (Figure 1) having a clamp to hold a doll upright. You draft the following independent claim:

1. A doll stand comprising a base (1), a hollow threaded tube (2) upstanding from the base, said hollow threaded tube having an outer diameter and an upper surface parallel to said base, a threaded rod (3) disposed in and threadedly interrelated with said hollow threaded tube, and a clamp consisting of two metal wires (4 and 5) secured to said rod.



In the absence of questions of supporting disclosure, which of the following would not be a proper dependent claim in the application when the application is filed in the PTO?

- (A) 2. A doll stand according to Claim 1 further comprising a ring (6) coaxially disposed with respect to said hollow tube and threadedly interconnected with said rod, said ring having a bottom surface disposed in flat face contacting relation with the upper surface of the hollow tube, said ring being seated flush with said hollow tube.
- (B) 2. A doll stand according to Claim 1 wherein said base is pecan resin.
- (C) 2. A doll stand according to Claim 1 wherein said clamp further comprises horizontally disposed ceramic arms on the end of said metal wires.
- (D) (A) and (C).
- (E) (A), (B), and (C).

6. You draft a patent application disclosing and describing an electrical chronometer containing a resistor having a resistance of 10-90 ohms, preferably 40 ohms. You draft the following independent claim:

- 1. An electrical chronometer comprising a resistor with a resistance of 10-90 ohms.

Which of the following would not be a proper dependent claim if presented as an original claim in the application when the application is filed in the PTO?

- (A) 2. The electrical chronometer of Claim 1 wherein the resistor has a resistance of 40 ohms.
- (B) 2. An electrical chronometer as in Claim 1 wherein the resistor has a resistance of 40-90 ohms.
- (C) 2. An electrical chronometer as in Claim 1 wherein the resistor has a resistance of about 10 - 90 ohms.
- (D) 2. The electrical chronometer of Claim 1 wherein the resistor has a resistance of between 50 and 90 ohms.
- (E) (C) and (D).

7. A patent application discloses a multi-layer material for a diver's wet suit wherein an outer layer is a structural fabric; the first inner layer is a plush layer of a combination of cotton, silk, wool, and synthetic fabric interwoven together, and bonded to an outer layer; a second inner layer is a plush layer of cotton, silk, wool, or synthetic fabric bonded to the first inner layer opposite the outer layer, wherein the bond between the outer layer and the first inner layer is a water resistant material. Claim 1 in the application is as follows:

1. A multi-layer material for a diver's wet suit comprising:
 - i) an outer layer comprising a structural fabric;
 - ii) a first inner layer of a plush layer which is a member selected from the group comprising cotton, silk, wool, and synthetic fabric, said first inner layer bonded to said outer layer; and
 - iii) a second inner layer of a plush layer of cotton, silk, wool, or synthetic fabric bonded to the first inner layer opposite the outer layer; wherein a water resistant material comprises a bond between said outer layer and said first inner layer.

Claim 1 is properly rejected under 35 U.S.C. § 102 over an article published 5 years before the filing date of the application disclosing a multi-layer material for a diver's wet suit having an outer layer which is a structural fabric; a first inner, plush layer of cotton, the first layer being bonded to the outer layer by a water resistant material; and a second inner, plush layer of cotton, silk, wool, or synthetic fabric bonded to the first inner layer opposite the outer layer. The specification is also objected to under 35 U.S.C. § 112, first paragraph, as not providing an adequate written description of the invention as claimed. Claim 1 is rejected for the same reasons. The rejection and objection may be properly obviated by:

- (A) A response arguing that the publication is not relevant because it lacks silk, wool, and synthetic fabric in the first inner layer, and arguing that, as an original claim, Claim 1 does not need antecedent basis in the specification.
- (B) In line 4, amending "comprising" to "consisting of" to define the first inner layer as being "a plush layer which is a member selected from the group consisting of cotton, silk, wool, and synthetic fabric, said first layer bonded to said outer layer"; and arguing that the amended claim overcomes the publication because it requires the first inner layer to be a plush layer of a combination of cotton, silk, wool, and synthetic fabric, and it now conforms with the original disclosure in the specification.
- (C) In line 4, amending "comprising" to "consisting essentially of" to define the first inner layer as being "a plush layer which is a member selected from the group consisting essentially of cotton, silk, wool, and synthetic fabric, said first layer bonded to said outer layer"; and arguing that the amended claim overcomes the publication because it requires the first inner layer to be a plush layer of a combination of cotton, silk, wool, and synthetic fabric, and it now conforms with the original disclosure in the specification.

- (D) In line 3, amending Claim 1 by deleting the phrase "which is a member selected from the group comprising," and inserting in its place the phrase "of a combination of"; and in line 4, after "fabric" inserting "interwoven together" to define the first inner layer as being "a plush layer of a combination of cotton, silk, wool, and synthetic fabric interwoven together, said first inner layer bonded to said outer layer"; and arguing that the claim, as amended, now conforms with the original disclosure in the specification, and the publication does not teach the claimed combination of interwoven fabrics in the first layer.
- (E) (B), (C), and (D) are equally correct.

8. Claim 1 in the patent and as amended below is fully supported by the original disclosure in the application.

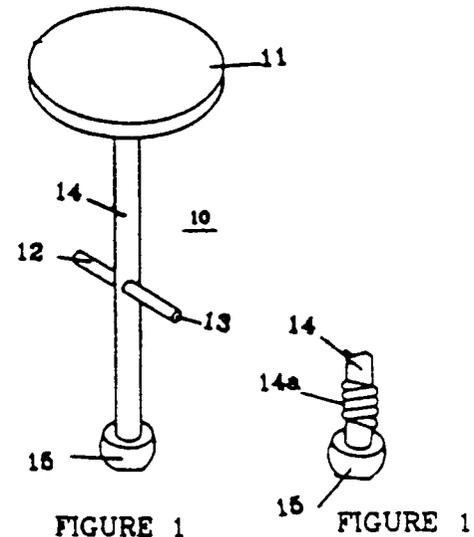
- 1. A fluorescent light fixture comprising:
 - i) a semicylindrical enclosure;
 - ii) a fluorescent light lockably connected in the enclosure;
 - iii) a pair of [bayonet] sockets on opposite ends of said enclosure which engage the fluorescent light; and
 - iv) a longitudinal adjustment screw [means] positioned between each [bayonet] socket and one of said ends of said enclosure to secure said fluorescent light to said pair of [bayonet] sockets.

Claim 1 is the only claim in the original patent. Claim 1, as so amended, may be considered proper in:

- (A) In a reissue application filed within two years of the patent grant wherein claims broadening the scope of the claimed invention may be presented in appropriate circumstances.
- (B) In a reissue application filed any time during the term of the patent inasmuch as the claim does not seek to enlarge the scope of Claim 1 in the original patent.
- (C) Only in a request for reexamination.
- (D) In a request for reexamination or in a reissue application filed within two years of the patent grant wherein claims broadening the scope of the claimed invention may be presented in appropriate circumstances.
- (E) In a request for reexamination or in a reissue application filed any time during the term of the patent inasmuch as the scope of Claim 1 in the original patent is narrowed by replacing the word "means" with the word "screw."

Questions 9 and 10 below rely on the patent application drawings (Figures 1 and 1a) below and to the right, which are the only drawings in the application. Consider Questions 9 and 10 independently of each other.

9. You are drafting a patent application for your client. The invention disclosed in the specification is a floating stool for use in a swimming pool. The stool, as shown in Figures 1 and 1a, has a seat 11, and a single leg 14 attached to the seat and extending downwardly from the seat. The stool also has gripping means 15 on the opposite end of the single leg for gripping the bottom of a pool. The specification discloses two specific embodiments of the gripping means, a suction cup, or a rubber tip having small depressions on the end which contact the pool bottom and provide a gripping surface. The specification also discloses that foot rests 12 and 13 may be secured to the single leg. Further, the specification discloses that in order for the stool to be vertical, a spring 14a can be secured between the lower end of the shaft 14 and the upper end of the gripping means 15.



Lastly, the specification discloses that the spring may be used only with the suction cup because the spring causes the rubber tip having small depressions to be dislodged from the pool bottom. The first three claims in the application are as follows:

1. A floating stool for use in a swimming pool, the stool comprising a seat, a single leg attached to and extending downwardly from said seat, and gripping means on said single leg.
2. The stool according to Claim 1 further comprising a foot rest.
3. The stool according to Claims 1 or 2 wherein the gripping means is a suction cup.

Which of the following claims would be a proper Claim 4 and be supported by the specification?

- (A) 4. The stool according to Claim 3 wherein the gripping means is a rubber tip having small depressions on its end.
- (B) 4. The stool according to Claim 2 wherein the gripping means is a rubber tip having small depressions on its end.
- (C) 4. The stool according to Claims 1, 2, or 3 further comprising a spring.
- (D) 4. The stool according to Claims 1 and 2 wherein the gripping means is a rubber tip having small depressions on its end whereby the bottom of a pool is contacted and a gripping surface is provided.
- (E) 4. The stool according to Claims 1 or 2 wherein said gripping means is a rubber tip having small depressions on its end, and further comprising a spring secured between the lower end of the shaft and the upper end of the gripping means.

10. In July 1996, you simultaneously filed in the PTO your client's declaration under 37 CFR § 1.63 and a patent application. The invention disclosed in the specification of the application describes a floating stool for use in a swimming pool. The stool is shown in the drawings filed with the application (Figures 1 and 1a) as having a seat 11, a single leg 14, gripping means 15, and foot rests 12 and 13. On August 20, 1997, you discovered that the foot rests are shown in the drawing, but are not described in the specification or set forth in the claims. Your client wants to claim the stool with the foot rests. What is the most appropriate way, if any, to meet your client's objectives of quickly obtaining patent protection on this invention?

- (A) File a C-I-P application identifying the foot rests as new matter and including claims to the stool with the foot rests.
- (B) Amend the description of the specification to include the foot rests.
- (C) Present the foot rests in new claims added by amendment.
- (D) (A) and (B).
- (E) (B) and (C).

11. You are drafting a patent application disclosing and describing a door assembly wherein a door, a door frame, and a pair of hinges are separate elements which must be included in a claim to the assembled combination of a door secured to a door frame by a pair of hinges. The application discloses that it is essential to the invention that the door be secured to the door frame in the described manner to permit the door to be readily opened and closed. The application further discloses that the assembly, in a closed relationship, keeps out exterior elements, and provides privacy while permitting quick egress in an emergency. Which of the following claims properly sets forth the combination?

- (A) An assembly having a door capable of being hingedly connected to a door frame.
- (B) An assembly having a door and means for securing the door.
- (C) An assembly having a door and a pair of hinges for securing the door.
- (D) An assembly having a door, and a door frame, said door being secured to said door frame with a pair of hinges.
- (E) An assembly having a door adapted to be secured to a door frame with a pair of hinges.

12. Inventor A filed a patent application in the PTO on November 12, 1993, disclosing an acne-treating composition which was described in the specification as comprising 5-22 mg. salt; 8-15, preferably 8-10, mg. sugar; 0.01-2.0, preferably 0.5-1.0, mg. sodium nitrate; and 0.01-1.0, preferably 0.04-0.06, mg. vitamin C. On June 6, 1995, a patent was granted to A. The patent contains only the following claim:

1. An acne-treating composition comprising 5-22 mg. salt, 8-10 mg. sugar, 0.5-1.0 mg. sodium nitrate, and 0.01-1.0 mg. vitamin C.

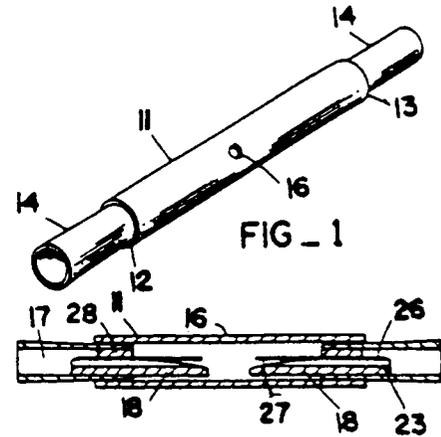
Recently, inventor A became aware of a British patent published in 1990 disclosing an acne-treating composition consisting of 10 mg. salt, 9 mg. sugar, 0.6 mg. sodium nitrate, and 0.02 mg. vitamin C. Inventor A files a reissue application with an amended claim. In which of the following situations would amended Claim 1, which is supported by the disclosure of the application filed on November 12, 1993, be sufficient to distinguish over the British patent?

- (A) The reissue application is filed on May 6, 1997, containing the following amended claim:
 1. An acne-treating composition consisting of 5-22 mg. salt, 8-10 mg. sugar, 0.5-1.0 mg. sodium nitrate, and 0.01-1.0 mg. vitamin C.
- (B) The reissue application is filed on May 6, 1997, containing the following amended claim, and an affidavit showing that the amount of vitamin C in amended Claim 1 provides an unexpected 210% improvement in the treatment of acne:
 1. An acne-treating composition comprising 5-22 mg. salt, 8-10 mg. sugar, 0.5-1.0 mg. sodium nitrate, and [0.01]0.02-[1.0]0.06 mg. vitamin C.
- (C) The reissue application is filed on July 7, 1997, containing the following amended claim, and an affidavit showing that the amount of vitamin C in amended Claim 1 provides an unexpected 200% improvement in the treatment of acne:
 1. An acne-treating composition comprising 5-22 mg. salt, 8-10 mg. sugar, 0.5-1.0 mg. sodium nitrate, and [0.01]0.04-[1.0]0.06 mg. vitamin C.
- (D) The reissue application is filed on July 7, 1997, containing the following amended claim, and an affidavit showing that the amounts of sugar and vitamin C in amended Claim 1 provide an unexpected 180% improvement in the treatment of acne:
 1. An acne-treating composition comprising 5-22 mg. salt, 8-[10]15 mg. sugar, 0.5-1.0 mg. sodium nitrate, and [0.01]0.04-[1.0]0.06 mg. vitamin C.
- (E) All of the above.

13. Claim 1 in a patent application describes a bird call device shown in the drawings to the right (Figures 1 and 2). Claims 1 through 5 read as follows:

1. A bird call comprising:

- i) a hollow tubular body (11) open at both ends ((12) and (13));
- ii) a blowhole (16) in said tubular body intermediate of said ends; and
- iii) a pair of reed assemblies (14), each of said reed assemblies disposed in one of said ends of said tubular body, each of said reed assemblies including a reed (26) having a freely vibrating end (27) extending inwardly into said tubular body, and adapted to be actuated by an airstream introduced through said blowhole.



- 2. The reed assemblies according to Claim 1 wherein each reed assembly includes a truncated conical member having a bore (17) therethrough, said member being received narrow end first in one of said ends of the tubular body.
- 3. The bird call of Claim 2, further including a compression plug (28) for impinging on and removably securing said reed (26) and said tongue (18) in said bore.
- 4. The bird call according to Claim 1 wherein said reed assemblies each include a longitudinally extending tongue (18) having a longitudinally extending air channel therein (23).
- 5. The longitudinally extending air channel according to Claim 4, wherein said air channel terminates in said tongue.

Which of the following is/are proper dependent claim(s) in accordance with 37 CFR § 1.75?

- (A) Claim 2.
- (B) Claim 3.
- (C) Claim 4.
- (D) Claim 5.
- (E) Claims 2 through 5.

14. Assuming that each of the following claims is in a different utility patent application, and each claim is fully supported by the disclosure in the application in which the claim appears, which of the claims, if any, particularly points out and distinctly claims the invention?

- (A) A system for the display of stereographic three-dimensional images of celestial objects as disclosed in the specification and drawings.
- (B) The features of novelty herein disclosed.
- (C) As a new article of manufacture, a door mat made of corn-husks substantially as described.
- (D) A paint remover as herein shown and described.
- (E) None of the above.

15. Assuming that each of the following claims is in a different utility patent application, and each claim is fully supported by the disclosure in preceding claims or in the application in which the claim appears, which of the claims properly presents a process claim?

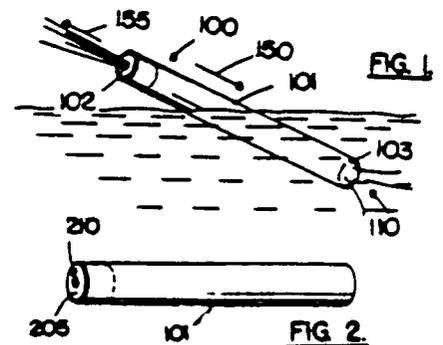
- (A) A process for using monoclonal antibodies to isolate and purify interferon.
- (B) A process of using paint to cover a surface comprising applying paint to a surface and removing the excess.
- (C) The use of a metallic fibrous compound having a proportion of metallic granules as a motor compression part subject to stress by sliding friction.
- (D) The use of a sustained release therapeutic agent in a human body wherein said sustained release therapeutic agent comprises a pain killer absorbed on a polymeric surface.
- (E) All of the above.

16. You filed a patent application for a client containing a claim to a composition wherein X is defined as follows: "X is a member selected from the group consisting of elements A, B, and C." The claim is properly rejected under 35 U.S.C. § 102(b) as being anticipated by a reference describing the same invention wherein X is element A. The rejection may be properly obviated by:

- (A) Amending the claim by canceling elements B and C because the reference is concerned only with element A.
- (B) Arguing that the reference is not relevant because it lacks elements B and C.
- (C) Amending the claim by canceling element A from the Markush group.
- (D) Amending the claim by changing "consisting of" to "consisting essentially of."
- (E) Amending the claim to redefine X as "being a member selected from the group comprising elements A, B, and C."

17. Claims 1 and 2 in a patent application are drawn to a toy shown in the drawings to the right (Figures 1 and 2). The toy produces a water spray. Claims 1 and 2 read as follows:

1. A toy (100) for producing a spray of water comprising:
 - i) a tube (101) having opposed ends (102 and 103); and
 - ii) a restriction means (210) disposed on one of said opposed ends to form an internal restriction at one end (102) of said tube, whereby a spray of water (155) is produced when the unrestricted end (103) of said tube is forcibly thrust (150) into a body of water.
2. Apparatus as set forth in claim 1 wherein a tube has a uniform diameter.



Which of the following is a proper manner for amending Claim 2 for the first time?

- (A) 2. (amended once) [Apparatus as set forth in claim 1] A toy for producing a spray of water comprising a tube (101) having opposed ends (102 and 103); and a restriction means (210) disposed on one end of said tube, to form an internal restriction at one end (102) of said tube. wherein [a] said tube has a uniform diameter.
- (B) 2. (amended once) (Apparatus as set forth in claim 1) A toy for producing a spray of water comprising a tube (101) having opposed ends (102 and 103); and a restriction means (210) disposed on one end of said tube, to form an internal restriction at one end (102) of said tube, wherein [a] said tube has a uniform diameter.
- (C) 2. (amended once) A toy as set forth in Claim 1 wherein a tube has a uniform diameter.
- (D) 2. (amended once) [Apparatus as set forth in claim 1] A toy as set forth in Claim 1 wherein said tube has a uniform diameter.
- (E) (A) and (D).

18. Your client informs you that he has discovered a chemical compound that exhibits outstanding insecticidal properties, and he provides you with reliable test data establishing this fact. Assume that the name "compound Z" fully and definitely identifies such compound. Preliminary to preparing a patent application, you conduct a search of the prior art, and find that the compound *per se* and a method for its preparation are disclosed in a scientific journal that was published some 75 years ago. Notwithstanding, you decide to file a patent application on your client's invention. Which of the following is the best way to claim your client's invention?

- (A) A method of preparing compound Z, said compound being characterized by outstanding insecticidal properties.
- (B) An insecticidal compound consisting of compound Z.
- (C) A process for using compound Z as an insecticide.
- (D) An insecticide substantially as shown and described.
- (E) An insecticide comprising compound Z and a carrier.

19. Applicant's specification discloses a process for converting compound X to compound Y by heating at a temperature in the range of 275°F to 295°F in the presence of a trivalent metallic chloride catalyst. However, the specification indicates the heating must occur in an inert atmosphere. The specification also discloses the following test results:

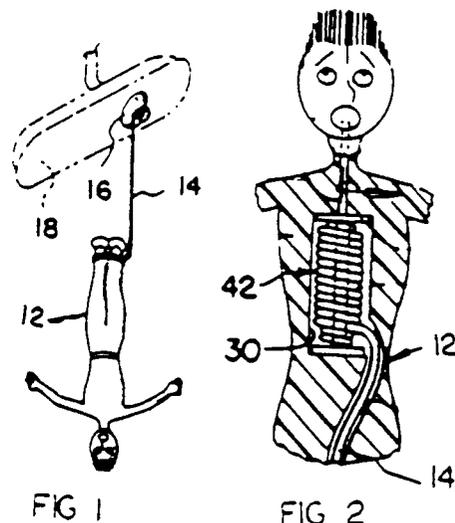
<u>Test No.</u>	<u>Catalyst</u>	<u>Temperature</u>	<u>Conversion</u>
1	AlCl ₃	275°F	94%
2	AlCl ₃	295°F	89%
3	ScCl ₃	275°F	90%
4	ScCl ₃	295°F	87%

Of the following claims, which is the broadest claim that particularly points out and distinctly claims the invention that can reasonably be expected to be allowed in the absence of prior art?

- (A) A process for converting compound X to compound Y by heating compound X in an inert atmosphere at a temperature in the range of 275°F to 295°F in the presence of a bivalent metallic chloride catalyst.
- (B) A process for converting compound X to compound Y by heating compound X in an inert atmosphere at a temperature in the range of 275°F to 295°F in the presence of a trivalent metallic chloride catalyst.
- (C) A process for converting compound X to compound Y by heating compound X in an inert atmosphere at a temperature of 275°F or 295°F in the presence of a trivalent metallic chloride catalyst.
- (D) A process for converting compound X to compound Y by heating compound X at a temperature in the range of 275°F to 295°F in the presence of a trivalent metallic chloride catalyst.
- (E) A process for converting compound X to compound Y by heating compound X in an inert atmosphere at a temperature of 275°F or 295°F in the presence of a trivalent metallic chloride catalyst selected from the group consisting of AlCl₃ and ScCl₃.

20. You draft a patent application disclosing and describing a figurine simulating an inverted suspended human shown in the drawings to the right (Figures 1 and 2), i.e., a bungee jumper, for suspended attachment to an object, such as an automobile rear view mirror (18). You draft the following independent claim:

1. A suspended doll consisting of:
 - a) a plastic, human-shaped figurine (12) having a top end and a bottom end;
 - b) a resiliently deformable elastic material (14) extending from said bottom end of said figurine; and
 - c) an attachment means (16) coupled to said resiliently deformable elastic material for mounting said resiliently deformable elastic material to an object whereby said figurine is suspended therefrom in an inverted position.



In the absence of questions of supporting disclosure, which of the following would not be a proper dependent claim in the application when the application is filed in the PTO?

- (A) 2. The suspended doll of Claim 1 wherein said figurine body defines an interior cavity (30), and has a retracting, metallic spring (42) disposed within the cavity.
- (B) 2. The suspended doll of Claim 1 wherein the body of said human-shaped figurine has a head, two arms, and two legs.
- (C) 2. The suspended doll of Claim 1 wherein the resiliently deformable elastic material is rubber.
- (D) 2. The suspended doll of Claim 1 wherein said attachment means is a suction cup coupled to said resiliently deformable elastic material.
- (E) 2. The suspended doll of Claim 1 wherein said attachment means is a suction cup coupled to said resiliently deformable elastic material, and said resiliently deformable elastic material is rubber.

21. In the printing field industry, it is normal to attach a web-manifolding machine to a typewriting machine for the purpose of feeding carbon sheets to the typewriting machine. Carbon sheets are not part of the machines. Applicant has noted that the ordinary length carbon sheets wear out rather quickly and proposes a novel extra length carbon sheet that will last over an extended period of time. Which of the following claims would cover applicant's invention in accordance with proper PTO practice and procedure?

- (A) A web-manifolding machine including a typewriting machine, said typewriting machine having a platen and typing instrumentalities, a carbon-stripper at the rear of said platen, a continuous belt of web-plyes threaded through said carbon-stripper and extending to said platen, and carbon sheets attached to said carbon-stripper interleaved between said web plyes.
- (B) A web-manifolding machine including a carbon-stripper attached to a platen, a continuous belt of web-plyes threaded through said carbon-stripper and extending to said platen, and carbon sheets attached to said carbon-stripper interleaved between said web-plyes.
- (C) A web-manifolding machine including a typewriting machine, said typewriting machine having a platen and typing instrumentalities, a carbon-stripper at the rear of said platen, a continuous belt of web-plyes threaded through said carbon-stripper and extending to said platen, and carbon sheets.
- (D) A web-manifolding machine including a typewriting machine, said typewriting machine having a platen and typing instrumentalities, a carbon-stripper at the rear of said platen, means for threading a continuous belt of web-plyes through said carbon-stripper to said platen, and means for attaching carbon sheets to said carbon-stripper and interleaving said carbon sheets between said web-plyes.
- (E) None of the above.

22. John Doe, while employed as a research scientist for the ABC Corporation, a leading manufacturer of synthetic detergents for cleaning pots and pans, discovered in 1994 that the addition of water-soluble polyphosphates to ABC's commercially marketed Brand X greatly improved the effectiveness of the Brand X composition as a detergent. However, shortly after introducing the improved Brand X in the marketplace, complaints started pouring in indicating that tarnishing was occurring with respect to utensils made from copper or copper-nickel alloys. After further research in 1996, John Doe was able to resolve the "tarnish" problem by incorporating a tarnish inhibitor consisting of a complex organic compound into the improved Brand X composition. The structural formula of the tarnish inhibitor was depicted with a Y radical, Y being defined as a radical selected from the group consisting of mercapto and amino radicals.

ABC has retained you to prepare and file a patent application protecting the improved Brand X composition with the tarnish inhibitor. Accordingly, your application as filed in 1997 includes test data revealing the tarnish inhibiting characteristics of a number of different detergent samples, including those containing tarnish inhibitors having a mercapto radical and those containing tarnish inhibitors having an amino radical. All of the original claims are directed to the tarnish inhibiting detergent and include the following language: "Y being defined as a radical selected from the group consisting of mercapto and amino radicals." In the first Office action, the examiner rejected all claims as being anticipated by a 1991 French patent disclosing a detergent containing a water-soluble polyphosphate and a tarnish inhibitor consisting of a complex organic compound containing an amino radical. Which of the following actions accords with PTO practice and procedure and would provide the best chance of obtaining an allowance in the quickest manner?

- (A) File an amendment limiting all claims to a detergent containing a water-soluble polyphosphate and a tarnish inhibitor consisting of a complex organic compound containing a mercapto radical.
- (B) File a divisional patent application limiting all claims to a detergent containing a water-soluble polyphosphate.
- (C) File a file wrapper continuation application limiting all claims to a detergent containing a water-soluble polyphosphate and a tarnish inhibitor.
- (D) File an amendment canceling all test data relating to a tarnish inhibitor consisting of a complex organic compound containing an amino radical.
- (E) File an amendment canceling all test data relating to a tarnish inhibitor consisting of a complex organic compound containing an amino radical, canceling all claims, and adding new claims to a detergent containing a water-soluble polyphosphate and a tarnish inhibitor consisting of a complex organic compound containing an amino radical or a mercapto radical.

23. A patent application discloses a method for using a composition consisting of alkyl magnesium halide as a reagent in certain chemical syntheses. The application discloses test data revealing that the preferred halides are chloride, bromide and iodide. The application also discloses that optionally, fluoride, another halide, could be employed as the halide. Which of the following expressions, if recited in a claim in the application would be in violation of 35 U.S.C. § 112, second paragraph?

- (A) "a composition consisting of alkyl magnesium halide"
- (B) "a composition comprising alkyl magnesium halide, wherein the halide is selected from the group comprising chloride, bromide, or iodide"
- (C) "a composition consisting of alkyl magnesium halide, wherein the halide is selected from the group consisting of chloride, bromide, iodide, and fluoride"
- (D) "a composition consisting of alkyl magnesium halide, wherein the halide is selected from the group consisting of chloride, bromide, and iodide, and optionally, fluoride"
- (E) "a composition consisting of alkyl magnesium chloride"

24. Applicant filed a patent application disclosing an apparatus for use in conjunction with a range in a home for the serving of sizzling steaks and the like on a table. The apparatus includes primarily a grill upon which the food, such as steaks or chops, is both broiled and served. The invention contemplates that the food will be cooked on the grill in the broiling compartment of the range. The grill is transferred, by disclosed mechanical means, to a table without removal of the food from the grill. Which of the following claims avoids a rejection under 35 U.S.C. § 112, second paragraph, based upon a lack of cooperation between the recited elements?

- (A) An apparatus comprising a drip pan, a server, and a grill, whereby the grill is adapted to be transferred from the drip pan to the server.
- (B) An apparatus for use in conjunction with a range in a home for the serving of sizzling steaks and the like on a table, comprising a drip pan, a server, and a grill.
- (C) An apparatus comprising a drip pan, the drip pan having a dished central portion forming a primary drain receptacle, a server, the server having a dished central portion forming a secondary drain receptacle, and a grill.
- (D) An apparatus comprising a drip pan, a server, and mechanical means for transferring the grill from the drip pan to the server.
- (E) An apparatus comprising a drip pan, said drip pan having a dished central portion forming a primary drain receptacle, and a grill, said grill being removably positioned in the dished central portion of the drip pan.

25. Applicant filed a patent application relating to a prefabricated water-tight structure which utilized steel panels to which is bonded an elastomeric chlorosulphonated polythene. The elastomeric chlorosulphonated polythene is sold under the trademark HYPALON. It is acknowledged that those skilled in the art know how to make such materials adaptable for a variety of building applications. Assuming no issue of support arises, which of the following claims is properly rejectable under 35 U.S.C. § 112, second paragraph?

- (A) 1. A prefabricated panel for a building system having a surface comprising HYPALON continuously bonded to a surface of a thin sheet steel member by an adhesive which is resistant to corrosive fluids.
- (B) 1. A prefabricated water-tight structure comprising a prefabricated panel, said panel comprising a thin sheet steel member bonded by an adhesive to an elastomeric chlorosulphonated polythene, said elastomeric chlorosulphonated polythene being sold under the trademark HYPALON, and said adhesive being resistant to corrosive fluids.
- (C) 1. A prefabricated water-tight structure comprising an elastomeric chlorosulphonated polythene, an adhesive, and a thin sheet steel member, said elastomeric chlorosulphonated polythene being sold under the trademark HYPALON, and characterized by good wear resistance, and said elastomeric chlorosulphonated polythene being continuously bonded by said adhesive to a surface of a thin sheet steel member, said adhesive being resistant to corrosive fluids.
- (D) 1. The prefabricated panel for a structure having a surface comprising a thin membrane of an elastomeric chlorosulphonated polythene, said elastomeric chlorosulphonated polythene being continuously bonded to a surface of a thin sheet steel member by an adhesive.
- (E) 1. A prefabricated water-tight structural system comprising a diaphragm characterized by good heat, ozone and weather resistance, said diaphragm having a surface comprising a thin membrane of an elastomeric chlorosulphonated polythene, said elastomeric chlorosulphonated polythene continuously bonded to a surface of a thin sheet steel member by an adhesive which is resistant to corrosive fluids.

26. Applicant's patent application is directed to a pressure sensitive adhesive composition comprising a water-based latex including a continuous aqueous medium containing dispersed particles of a normally tacky copolymer having a glass transition temperature of 0°C or less. The copolymer is made from at least 60% by weight monomer X, and at least 0.1% by weight monomer Y. 74%, 79% and 85% are exemplary weight percentages of monomer X, with the respective weight percentage balances of the copolymer being monomer Y. Glass transition temperature is defined as the temperature or temperature range at which an amorphous polymer changes from a hard, rigid, glassy state to a soft, flexible, rubbery state. Glass transition temperature is directly related to the types of monomers selected and monomer proportions selected. A prior art reference properly cited against the application discloses water-based latexes including a continuous aqueous medium containing dispersed particles of normally tacky copolymers made from the same monomers and proportions of monomers and in the same manner as disclosed by applicant. The prior art reference does not disclose the glass transition temperature of the copolymer. The reference compositions are disclosed as being used in binding agents in photographic gels and films. Which of the following claims, if any, is patentable over the reference?

- (A) A pressure sensitive adhesive composition comprising a water-based latex comprising a continuous aqueous medium containing dispersed particles of a normally tacky copolymer having a glass transition temperature of 0°C or less, said copolymer comprising at least 60% by weight monomer X, and at least 0.1% by weight monomer Y.
- (B) A pressure sensitive adhesive composition comprising a water-based latex comprising a continuous aqueous medium containing dispersed particles of a normally tacky copolymer having a glass transition temperature of 0°C or less, said copolymer comprising 74% by weight monomer X, and the balance monomer Y.
- (C) A pressure sensitive adhesive composition comprising a water-based latex comprising a continuous aqueous medium containing dispersed particles of a normally tacky copolymer having a glass transition temperature of 0°C or less, said copolymer comprising 79% by weight monomer X, and the balance monomer Y.
- (D) A pressure sensitive adhesive composition comprising a water-based latex comprising a continuous aqueous medium containing dispersed particles of a normally tacky copolymer having a glass transition temperature of 0°C or less, said copolymer comprising 85% by weight monomer X, and the balance monomer Y.
- (E) None of the above.

27. Applicant filed a patent application relating to adhesive compositions having a paste-like consistency and comprising filler admixed with liquid monomer, the filler being water-insoluble solid filler which forms a paste with the liquid monomer, and is essentially inert with respect to the monomer and is insoluble in the monomer. The specification states, "The compositions of this invention must contain, as essential ingredients, at least one monomer of a class of alpha-cyanoacrylic acid esters and at least one filler." The compositions are characterized as being capable of being applied to a substrate submerged in water. Claim 1 reads as follows:

1. An adhesive composition having a paste-like consistency and comprising filler admixed with liquid monomer, the filler being water-insoluble solid filler which forms a paste with the liquid monomer, and is essentially inert with respect to the monomer and is insoluble in the monomer, the composition being capable of being applied to a substrate submerged in water.

The examiner rejected claim 1 under 35 U.S.C. § 112, second paragraph, by virtue of the functional statement regarding application to a substrate submerged in water therein, and under 35 U.S.C. § 112, first paragraph, as unduly broad. You decide to amend the application by canceling claim 1 and adding a new claim or claims. Assuming proper claim numbering, which of the following claims and arguments accords with proper PTO practice and procedure and would overcome the rejections?

- (A) Claim - An adhesive composition having a paste-like consistency and comprising filler admixed with liquid monomer, the filler being water-insoluble solid filler which forms a paste with the liquid monomer, and is essentially inert with respect to the monomer and is insoluble in the monomer.
Argument - The 35 U.S.C. § 112, second paragraph, rejection is obviated because the functional statement is no longer recited in the claim. The 35 U.S.C. § 112, first paragraph, rejection is traversed on the ground that the liquid monomer is fully supported by the specification.
- (B) Claim - An adhesive composition having a paste-like consistency and comprising filler admixed with at least one liquid monomer of a class known as alpha-cyanoacrylic acid esters, the filler being water-insoluble solid filler which forms a paste with the liquid monomer, and is essentially inert with respect to the monomer and is insoluble in the monomer, the composition being capable of being applied to a substrate submerged in water.
Argument - The 35 U.S.C. § 112, second paragraph, rejection is traversed on the ground that functional language in patent claims is permissible so long as it sets out and circumscribes a particular area with a reasonable degree of precision and particularity. The 35 U.S.C. § 112, first paragraph, rejection is obviated because the breadth of the language "liquid monomer" has been narrowed to an essential ingredient, i.e., at least one liquid monomer of a class known as alpha-cyanoacrylic acid esters.

- (C) Claim - An adhesive composition having a paste-like consistency and comprising at least one monomer of a class known as alpha-cyanoacrylic acid esters.
Argument - The 35 U.S.C. § 112, second paragraph, rejection is obviated because the functional statement is no longer recited in the claim. The 35 U.S.C. § 112, first paragraph, rejection is traversed on the ground that the liquid monomer is fully supported by the specification.
- (D) Claim - An adhesive composition having a paste-like consistency and comprising filler admixed with at least one liquid monomer of a class known as alpha-cyanoacrylic acid esters, the filler being water-insoluble solid filler which forms a paste with the liquid monomer, and is essentially inert with respect to the monomer and is insoluble in the monomer.
Argument - The 35 U.S.C. § 112, second paragraph, rejection is obviated because the functional statement is no longer recited in the claim. The 35 U.S.C. § 112, first paragraph, rejection is obviated because the breadth of the language "liquid monomer" has been narrowed to an essential ingredient, i.e., at least one liquid monomer of a class known as alpha-cyanoacrylic acid esters.
- (E) (B) and (D).

28. Your client, A, owns a patent covering a golf club. The patent has one claim which states:

Claim 1. An apparatus for hitting golf balls comprising: a shaft having upper and lower ends and made of metal, and having a substantially elliptical cross-sectional area; a club head connected to said lower end of said shaft; and a grip portion connected to said upper end of said shaft.

One month after the patent has issued, A discovers that he incorrectly claimed his invention. The claim is too narrow because it limits the composition of the shaft to metal, whereas golf clubs can be made of graphite. The claim also does not adequately describe the direction of the ellipse in relation to the club as is set forth in the patent drawings. Your client intended his original patent application to be limited to golf clubs, as opposed to other types of apparatuses. A asks if the patent can be corrected. As a result, you file a reissue application within the next six months which includes an amended claim as follows:

Claim 1. A[n apparatus] golf club [for hitting golf balls] comprising: a shaft having upper and lower ends [and made of metal], and having a substantially elliptical cross-sectional area; a club head connected to said lower end of said shaft; and a grip portion connected to said upper end of said shaft; wherein the elliptical cross-sectional area is formed of an ellipse having a long axis parallel to the angle of motion during the golf swing.

The examiner only objects to the language “angle of motion during the golf swing” in the proposed amended claim as indefinite, but in all other respects, agrees to the amendment. In order to overcome the objection, you want to file a second amended claim. Which of the following would constitute **proper form** for a second amendment.

- (A) Claim 1. A golf club comprising: a shaft having upper and lower ends, and having a substantially elliptical cross-sectional area; a club head connected to said lower end of said shaft, and having a face; and a grip portion connected to said upper end of said shaft; wherein the elliptical cross-sectional area is formed of an ellipse having a long axis being perpendicular to the face of the club head.
- (B) Claim 1. A[n apparatus] golf club [for hitting golf balls] comprising: a shaft having upper and lower ends [and made of metal], and having a substantially elliptical cross-sectional area; a club head connected to said lower end of said shaft, and having a face; and a grip portion connected to said upper end of said shaft; wherein the elliptical cross-sectional area is formed of an ellipse having a long axis being perpendicular to the face of the club head.
- (C) Cancel claim 1 and add the following new claim:
Claim 1. A golf club comprising: a shaft having upper and lower ends, and having a substantially elliptical cross-sectional area; a club head connected to said lower end of said shaft, and having a face; and a grip portion connected to said upper end of said shaft; wherein the elliptical cross-sectional area is formed of an ellipse having a long axis being perpendicular to the face of the club head.

- (D) Claim 1. A[n apparatus] golf club [for hitting golf balls] comprising: a shaft having upper and lower ends [and made of metal], and having a substantially elliptical cross-sectional area; a club head connected to said lower end of said shaft, and having a face; and a grip portion connected to said upper end of said shaft; wherein the elliptical cross-sectional area is formed of an ellipse having a long axis being [parallel to the angle of motion during the golf swing] perpendicular to the face of the club head.
- (E) Both B and C constitute proper form of an amendment.

29. Applicant's application relates to an air filter assembly for filtering air laden with particulate matter. The following claim, supported by the specification, appears in the application:

1. An air filter assembly for filtering air laden with particulate matter comprising a housing having a clean air chamber and a filter chamber, said clean air chamber having a clean air outlet and said filter chamber having a dirty air inlet, means mounting a plurality of spaced-apart filter elements within the filter chamber, each of said elements being in fluid communication with said clean air outlet, pulse jet cleaning means intermediate said clean air outlet and said filter elements, and a hopper in said filter chamber for collecting particulate matter.

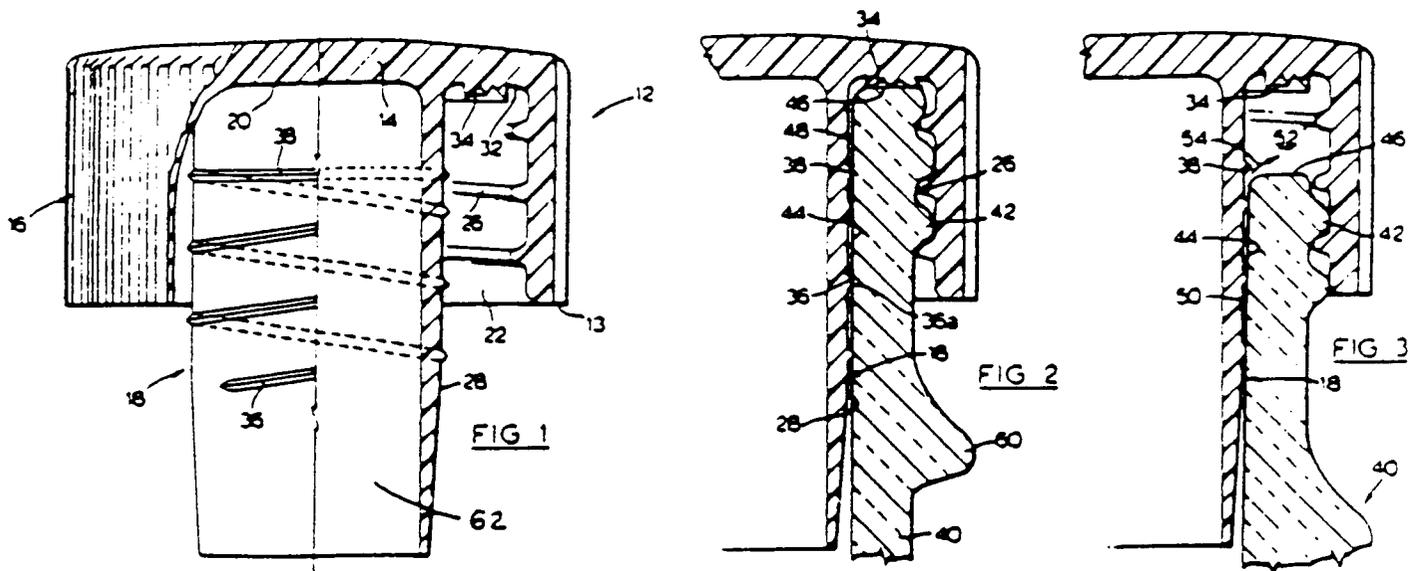
The claim is anticipated by a prior art reference, and the Examiner has applied a rejection under 35 U.S.C. § 102. Applicant's specification indicates that the filter chamber has a flexible wall, diaphragm-like structure. The flexible wall, diaphragm-like structure is responsive to pressure increases caused by the pulse jet cleaning means for moving particulate matter in a downward direction towards the bottom of the hopper. The prior art reference discloses a similar assembly with the exception that the filter chamber in the prior art has a rigid wall structure leading to the bottom of a hopper. The two assemblies employ jet pulses of compressed, high energy gas to dislodge particulate matter from spaced-apart filter elements, permitting the dislodged particulate matter to move towards the bottom of the hopper. Which of the following phrases, if any, when added after the word "matter" at the end of the claim would overcome the rejection under 35 U.S.C. § 102?

- (A) , said filter chamber having a wall, said particulate matter moving in a downward direction towards the bottom of the hopper.
- (B) , said filter chamber having means responsive to pressure increases caused by the pulse jet cleaning means for moving particulate matter in a downward direction towards the bottom of the hopper.
- (C) , said jet cleaning means functioning to dislodge particulate matter from the spaced-apart filter elements, thereby permitting the dislodged particulate matter to move towards the bottom of the hopper.
- (D) , said jet cleaning means designed to employ pulses of compressed, high energy gas to dislodge particulate matter from spaced-apart filter elements, permitting the dislodged particulate matter to move towards the bottom of the hopper.
- (E) None of the above.

PART 3: OPTION SECTIONS 3, 4, 5, & 6

DIRECTIONS: There are four OPTION SECTIONS, each with its own fact pattern. Select three of the four OPTION SECTIONS, and answer all the questions following the fact pattern in the three selected OPTION SECTIONS. DO NOT ANSWER QUESTIONS IN ALL FOUR OPTION SECTIONS. Record your answers on the Answer Sheet in the SECTION and line whose numbers correspond to the number of the OPTION SECTION and question you are answering.

OPTION SECTION 3 - BOTTLE STOPPER



Your client's invention relates to a threaded bottle stopper for a champagne bottle which controls the release of pressurized gas from the bottle to preclude both ejection of the stopper at a dangerous velocity and undesirable premature spillage of the contents of the bottle. With known prior art stoppers for champagne bottles, a problem exists in that the removal of the stopper from the neck of the bottle is either too easy or too difficult. As is well known, stoppers for bottles containing champagne can be ejected from the bottle at a dangerous velocity causing possible bodily injury and/or property damage.

It is therefore a principal object of the present invention to provide a threaded bottle stopper which reduces the hazard of the bottle stopper being ejected from the bottle at a high velocity and controls the release of pressurized gas from within the bottle so that the stopper is withdrawn from the bottle in a controlled manner, but with the familiar "pop" sound associated with the opening of a bottle of champagne.

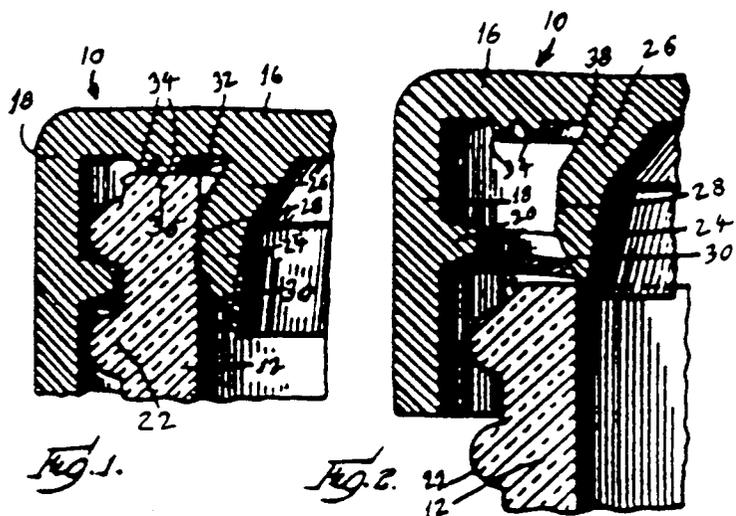
FIG. 1 shows a one piece bottle stopper 12 made of plastic, e.g. polyethylene. The stopper includes a cap that comprises a disc portion 14 with an annular skirt 16 depending from an inner surface 20 of the disc portion at its outer periphery. A continuous mechanical thread 26 is provided on the inside surface of the skirt 16 which engages a mating thread 42 on the external surface of bottle neck 40, as shown in FIG. 2. A flexible tubular body portion 18, generally concentric with the skirt, also extends from the inner surface 20 of the disc portion. The outer diameter of the tubular body portion 18 is less than the inner diameter of the skirt 16 so that an annular space 22 is defined therebetween. An annular base section 32 of the inner surface 20 of disc portion 14 constitutes the base of the annular space 22. Three concentric V-shaped seals 34 are provided on the annular base section 32 to contact the rim 46 of the bottle neck 40 and thereby seal the contents of the bottle, as shown in Fig. 2. These seals are described in the Jones U.S. Pat. No. 9,999,999, which patent in its entirety is incorporated herein by reference.

The outside surface 28 of the tubular body portion 18 is provided with structure which acts as a means for sealingly engaging the inner annular surface 44 of the bottle neck 40 and as a means for controllably releasing pressurized gas from within the bottle. The structure comprises an annular sealing ring 38 and a single spiral thread 36, each being integral with the outside surface 28 of the tubular body portion 18. The pitch of the spiral thread is a critical feature for the functioning of the cap. Your client tells you the invention must have a pitch of 3 - 8 threads per inch to work. More preferably, the pitch should be 4 - 6 threads per inch, and most preferably 4.5 to 5 threads per inch. The annular sealing ring 38 is positioned adjacent the annular base section 32 and is intended to be selectively moved into and out of sealing engagement with the inner annular surface 44 of the bottle neck 40. The single spiral thread 36 has a first end adjacent open end 62 of the tubular body portion 18 and a second end terminating at the annular sealing ring 38. The outside surface 28 of the tubular body portion 18 has a diameter that is less than the diameter of the inner annular surface 44 of the bottle neck 40 thereby defining an annular space 48. As shown in FIG. 2, the periphery 36a of the single spiral thread 36 contacts the inner annular surface 44 of the bottle neck 40 such that a spiral channel 50 is formed within space 48. When the bottle stopper is fully assembled on the bottle, the spiral channel 50 is open to the gas of the champagne at its first end, but is closed at its second end by sealing ring 38. The gas within the bottle is thereby prevented from passing into space 48 above the sealing ring 38.

In operation when the stopper is sufficiently partially rotated counter-clockwise, the V-shaped seals 34 and sealing ring 38 are released from engagement with the bottle, as shown in FIG. 3. The partial rotation of the stopper is not sufficient to release the engagement of threads 26 and 42 of the stopper and bottle, respectively. The seal release opens the interior of the bottle to the atmosphere via the spiral channel 50 and the unsealed spacing between the threads 26 and 42 of the stopper and bottle, respectively. The spiral channel 50 functions to control the flow of gas 54 released from the bottle into space 52 to reduce the danger of a high velocity release of the stopper, and to retain sufficient pressure within the bottle to have the desired "pop" when the stopper is fully released by further unscrewing the stopper from the bottle.

MILLER PATENT (U.S. PAT. NO. 7,777,777)

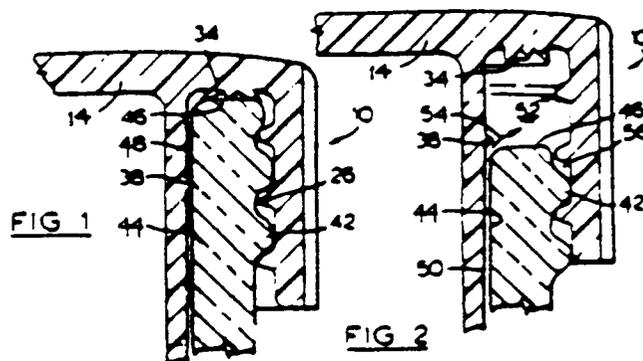
This invention relates to a combination closure cap and stopper for bottles. An object of the invention is to provide a cap which displays improved sealing efficiency and is resistant to being popped out by expansion of the contained product. FIG. 1 shows a flexible closure cap 10 of polyethylene closing off the neck 12 of a glass bottle. FIG. 2 shows the cap initially placed over a bottle. The cap 10 includes a disc 16 and a cylindrical wall 18 fixed to the edge of the disc. The interior surface of the wall 18 is provided with threads 20 for engaging cooperating threads 22 on the annular exterior surface of the neck 12 of the bottle.



The cap also includes a flexible skirt 24 connected to the disc 16 by a frusto-conical collar 26. Skirt 24 is concentric with and spaced apart from the cylindrical wall 18 so that a cylindrical sealing portion 28 of the skirt can engage the interior surface of the neck 12. The diameter of the sealing portion 28 exceeds the internal diameter of the neck 12. The skirt 24 is radially compressed when the bevel 30 of the skirt enters the neck 12. Two annular sealing ribs 34 of triangular cross-section are provided concentrically on the disc 16 and about the end surface 36 of the neck 12 when the closure cap 10 completely closes the bottle as seen in FIG. 1. In assembled position, the sealing portion 28 of the skirt engages the interior surface of the neck 12. The flexure of the collar 26 permits the skirt to engage the neck resiliently thereby effectively sealing bottles whose inside neck diameter varies slightly from standard dimensions. Due to the resiliency of the material used to make the cap, the ribs 34 axially compress slightly to provide additional sealing when the cap 10 is fully assembled.

JONES PATENT (U.S. Pat. No. 9,999,999)

FIGS. 1 and 2 are from the Jones patent. The numerals in the figures are interchangeable with the numerals in the figures in your client's application. The stopper 10 of this patent is identical to the stopper of the your client's application, except that the Jones patent does not disclose the single spiral thread 36 on the outer surface of the flexible tubular portion 28 that is described in your client's application.



The Jones patent more specifically describes the plural V-shaped seals on the inner surface of the disc portion 14 as comprised of three concentric seals 34. Inner and outer seals of the concentric seals 34 are deflectable and the intermediate seal is a compression seal that is considerably shorter than the inner and outer deflectable seals. The combination of the three concentric V-shaped seals has been found to conform to any nonuniformities on the rim 46 of the neck of the bottle.

DIRECTIONS: Please place your answers to the following questions in **SECTION 3** of the Answer Sheet.

1. Assuming no prior art rejections, which limitation included in a claim for the bottle stopper is most likely to gain the quickest allowance for that claim?

- (A) an inside surface of the annular skirt portion of the cap having threads thereon intended to engage threads on an external surface of the neck of the bottle, said pitch being 3 - 8 threads per inch.
- (B) an inside surface of the annular skirt portion of the cap having threads thereon intended to engage threads on an external surface of the neck of the bottle, and having a base section with a plurality of V shaped seals.
- (C) an inside surface of the annular skirt portion of the cap having threads thereon intended to engage threads on an external surface of the neck of the bottle, and having a spiral thread pitch of 4.5 to 5 threads per inch.
- (D) an inside surface of the annular skirt portion of the cap having threads thereon intended to engage threads on an external surface of the neck of the bottle, and having a spiral thread pitch of 3 - 8 threads per inch, preferably 4 - 6 threads per inch.
- (E) an inside surface of the annular skirt portion of the cap having threads thereon intended to engage threads on an external surface of the neck of the bottle, and including a tubular body portion depending from the inner surface of the disc portion of the cap.

2. In a utility patent application for your client, which of the following limitations must be included to distinguish his claimed invention from the prior art?

- (A) an inside surface of the annular skirt portion of the cap having threads thereon intended to engage threads on an external surface of the neck of the bottle.
- (B) an annular base section including a plurality of V-shaped seals for engaging a rim of a neck of said bottle.
- (C) a cap including a disc portion having an inner surface and an outer periphery.
- (D) a tubular body portion depending from the inner surface of the disc portion of the cap.
- (E) a tubular body portion of the cap including an outside surface having a single spiral thread intended to engage an inner annular surface of the neck of the bottle.

3. Your client indicates that he wants protection on the ornamental aspects of his invention. You decide to prepare a design patent application for him. Which of the following would be a proper design patent claim covering your client's invention?

- (A) The ornamental design for a bottle stopper.
- (B) The ornamental design for a bottle stopper as shown and described.
- (C) The ornamental design for an item as shown and described.
- (D) A bottle stopper which controls the release of pressurized gas from the bottle as shown and described.
- (E) The ornamental design for a champagne bottle neck and cap as shown and described.

OPTION SECTION 4: MULTILAYERED DROP CLOTH

PRIOR ART

FIG. 1 is cross-sectional view of a prior art lightweight multilayered dropcloth which absorbs fluids and which has a textured surface to prevent the dropcloth from slipping off objects. The prior art dropcloth has outer layers 1 and 5 made of spun bonded polypropylene film which is characterized by its ability to absorb and hold organic and inorganic liquids. Each of the outer layers have embossed depressions 6 to give the outer surfaces of the outer layers texture to prevent the cloth from slipping off the object it is covering. A center layer 3 is made of a plastic material such as low density polyethylene which is impervious to water. The outer layers 1 and 5 are bonded to the center layer 3 by adhesive layers 2 and 4, respectively. The center layer may contain an inorganic white pigment, such as TiO_2 , dispersed in the polyethylene. The thickness of the dropcloth is 0.0025 to 0.006 mils thick, preferably, 0.0035 mils thick.

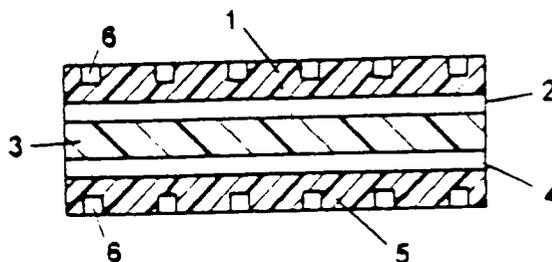


FIG. 1

OBJECTS OF THE INVENTION

The object of the invention is to provide a simple and inexpensive dropcloth having good ability to grip a covered surface, provide high absorption of fluids using a spun bonded plastic film, prevent penetration of absorbed fluids through the dropcloth, and prevent separation of the outer layers from the center layer. A further object of the invention is to provide a dropcloth having significant flexibility to allow appropriate draping thereof over objects, be consistent in form, and have a toughness and tear resistance equal to canvas and superior to prior art plastic dropcloths.

THE INVENTION

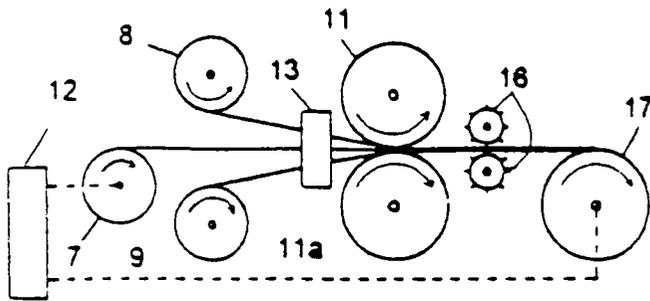


FIG. 2 (The Process)

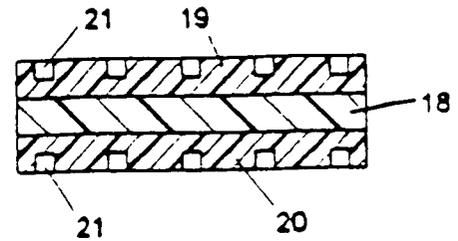


FIG. 3 (The Invention)

A cross-sectional view of the multilayered dropcloth of the present invention is shown in FIG. 3. The dropcloth is formed by a thermal bonding process illustrated in FIG. 2. Center layer 18 of the dropcloth is a plastic film while outer layers 19 and 20 of the dropcloth are each a spun bonded plastic film which absorbs fluids. Layers 18, 19, and 20 are provided by large supply rolls 7, 8, and 9, respectively. Supply rolls 8 and 9 are in an off-set alignment with respect to supply roll 7. A drive system 12 is coupled to the supply roll 7 and to a receiving roll 17. The films from supply rolls 7, 8, and 9 pass through the bonding apparatus at a fixed speed as determined by drive 12. The opposed faces of the films are passed through heating unit 13 to heat the faces of the films prior to moving the films between bonding rollers 11 and 11a. The heating unit rapidly heats the opposed faces of the films to form a fusion state while maintaining the integrity of the films. The heated films pass between bonding rollers 11 and 11a which press the films together with sufficient pressure over the entire interface of the films to effect a suitable fusion bond between the films.

A pair of embossing rollers 16 provide appropriate embossing configurations 21 on outer layers 19 and 20. The rollers include substantially aligned small surface projections to deform the surface of the outer layers and locate aligned depressions 21 in the surfaces of the outer plastic layers 19 and 20. In the preferred embodiment of the invention, the depressions 21 are uniformly distributed about the outer surfaces of the outer plastic layers of the dropcloth. Most preferably, a dropcloth is provided with small, closely spaced diamond-shaped depressions uniformly distributed about the surface of the outer plastic layers. The dropcloth film is then wound on the receiving roll 17.

In the preferred embodiment of the invention, each of the outer plastic layers 19 and 20 is a film of spun bonded polypropylene having a minimum thickness of 0.0005 mils, which is relatively thin and flexible. A spun bonded polypropylene film layer retains its flexible character up to a thickness 0.002 mils when combined with the plastic film of the center layer 18. In the most preferred embodiment of the invention, the two outer layers 19 and 20 are made of spun bonded polypropylene which includes short segments of spun bonded polybutylene dispersed in the spun bonded polypropylene to improve the effectiveness of surface gripping of the dropcloth. The spun bonded polybutylene has the characteristic of rubber enabling it to effectively grip surfaces, however, it is less absorbent than spun bonded polypropylene. Therefore, spun bonded polybutylene must be used in short segments.

The outer layers 19 and 20 of the multilayered dropcloth of present invention have surface depressions 21 on the outer surface of each outer layer to provide the dropcloth with an effective gripping surface such that the dropcloth remains in a draped position. The center layer 18 is a plastic film which must be 0.0005 to 0.002 mils thick in order prevent absorbed fluids on one side of the dropcloth from penetrating the other side of the dropcloth. The center layer may contain TiO_2 , an inorganic white pigment, uniformly dispersed throughout the film.

The center layer 18 is preferably a film of polyethylene or polypropylene which is 0.005 to 0.001 mils thick. The pigment is used to provide a contrast for liquids having colors other than white. It is preferred that the polyethylene be a relatively low density or linear low density polyethylene in contrast to high density polyethylene in order to maintain a significant degree flexibility of the film. The use of polypropylene for the center layer is most preferred because it is more readily bonded to the outer layers, and the combination forms a tough, strong cloth. Also, in the most preferred embodiment of the invention, TiO_2 pigment is present in the polypropylene film in an amount of 50 to 85% by weight of the polypropylene.

Significant flexibility of the dropcloth of this invention is achieved when the dropcloth is made with a total thickness, i.e. layers 18, 19, and 20 combined, from 0.0015 to 0.005 mils. Although dropcloths of greater thickness may be constructed, the cloth does not meet the objectives of the invention for flexibility. A dropcloth constructed with a lesser thickness does not meet the objectives of the invention because it can be easily torn.

DIRECTIONS: Please place your answers to the following questions in **SECTION 4** of the Answer Sheet.

1. Which of the following claims, if any, avoids anticipation by the prior art?

- (A) A multilayered dropcloth consisting of a first outer plastic layer, a center layer comprising a plastic film having a thickness in the range of 0.0005 to 0.002 mils, and a second outer plastic layer, each outer plastic layer comprising a spun bonded plastic film which absorbs fluids.
- (B) A fabric comprising a center core layer positioned between first and second outer layers, said outer layers made of spun bonded polypropylene film.
- (C) A multilayered dropcloth comprising a first outer plastic layer and a second outer plastic layer, each outer plastic layer consisting of a plastic film that retains water and a center layer comprising a plastic film.
- (D) (A) and (C).
- (E) (B) and (C).

2. Assuming proper antecedent basis, which of the following passages, if included in an independent claim directed to the described invention, particularly points out and distinctly claims the invention?

- (A) said center layer having opposed surfaces, said first outer plastic layer adhesively bonded to one of said surfaces and said second outer plastic layer adhesively bonded to the other of said surfaces
- (B) each of said first and second outer plastic layers having an inner surface, and each outer plastic layer having surface depressions on the inner surface separated by small raised portions
- (C) said dropcloth having a thickness within the range of 0.0025 to 0.005 mils
- (D) said first and second plastic layers bonded by heat on an adhesive layer
- (E) (A), (B), and (C).

3. Assuming that Claim 1 is anticipated by the prior art, which of the following dependent claims is not anticipated by the prior art and is supported by the written description provided herein?

- (A) 2. A dropcloth according to Claim 1, wherein the center layer plastic film is selected from the group consisting of low density polyethylene, linear low density polyethylene, and polypropylene.
- (B) 2. A dropcloth according to Claim 1, wherein the center layer plastic film contains an inorganic white pigment.
- (C) 2. A dropcloth according to Claim 1, wherein each of the first and second outer layers having an outer surface, and each outer layer having surface depressions on the outer surface uniformly distributed about said outer surfaces of said first and second outer layers.
- (D) 2. A dropcloth according to Claim 1, wherein each of the first and second outer layers is made of spun bonded polypropylene film containing segments of spun bonded polybutylene.
- (E) 2. A dropcloth according to Claim 1, wherein the thickness of the dropcloth is 0.0005 mils .

OPTION SECTION 5 - OFFICE CHAIR

THE PRIOR ART

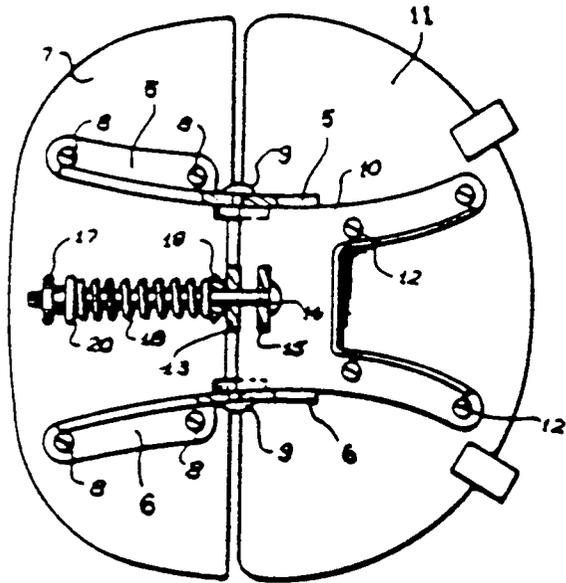


FIG. 2

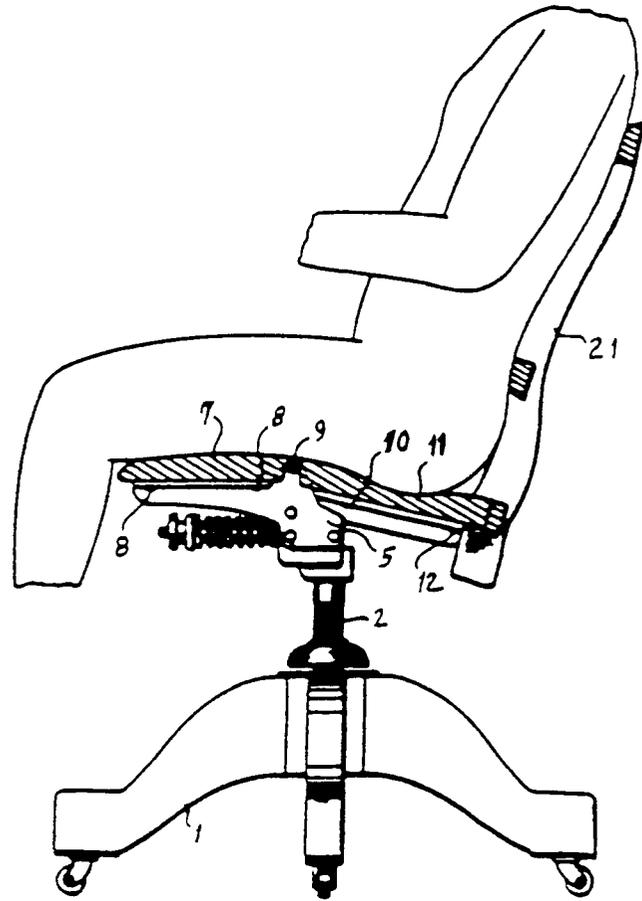


FIG. 1

A prior art chair is illustrated FIGS. 1 and 2. It includes a conventional base pedestal 1 made up of a plurality of legs with casters normally provided at the lowermost ends of the legs to facilitate movement of the chair, a vertically adjustable support column 2 mounted at its lower end to the base so that the height of the seat can be adjusted, and a pair of mounting brackets 5 and 6 connected to the upper end of the support column. The mounting brackets 5 and 6 are fixedly connected to the support column 2. The prior art chair seat includes a two-piece seat having a front portion 7 and a rear portion 11. The front portion 7 is fixedly secured to mounting brackets 5 and 6 by screws 8. The rear portion 11 is fixedly secured to a frame 10 by screws 12 and has a backrest 21 fixed thereto. The frame 10 is pivotally connected to mounting brackets 5 and 6 by pivot pins 9. It will be appreciated that the support column 2 is connected to the base in such a

manner that the overall height of the chair may be adjusted to accommodate a user thereof, and the support column is rotatably connected to either the base or the mounting brackets to permit pivoting movement by the user of the chair, both in manners well known in the art.

As more clearly shown in FIG. 2, spring 18 is captured on bolt 14 between nut and washer combination 17 and 20 and arcuate washer 19. The shank of the bolt runs through a flange 13 connected to the front portion 7 of the seat and a flange 15 connected to the frame member 10. The spring 18 resiliently biases the frame member 10 in an upward direction while permitting simultaneous rearward tilting of the backrest 21 and downward tilting of the rear portion 11. Thus a user seated in the chair is able to recline the backrest and rear portion of the seat and tilt the seat rearwardly while maintaining his or her thighs in a substantially fixed position.

When the height of the prior art chair is adjusted to a point where the user can comfortably work on a given surface, the surface may be at such a height that the user of the chair cannot comfortably place his or her feet upon the floor that supports the chair. If an attempt is made by the user to place his or her feet upon the floor, the prior art chair seat, which has a fixed front portion that remains in a horizontal plane, will exert an undesirable upward pressure on the thighs of the person sitting in the chair, resulting in substantial discomfort and adverse working conditions.

In order to overcome the disadvantages of the prior art, this invention involves a seat having a front portion and a rear portion with the rear portion fixed to the chair support structure and the front portion can be adjusted for the comfort of the user.

THE INVENTION

The embodiments of the present invention are illustrated FIGS. 3 and 4 below.

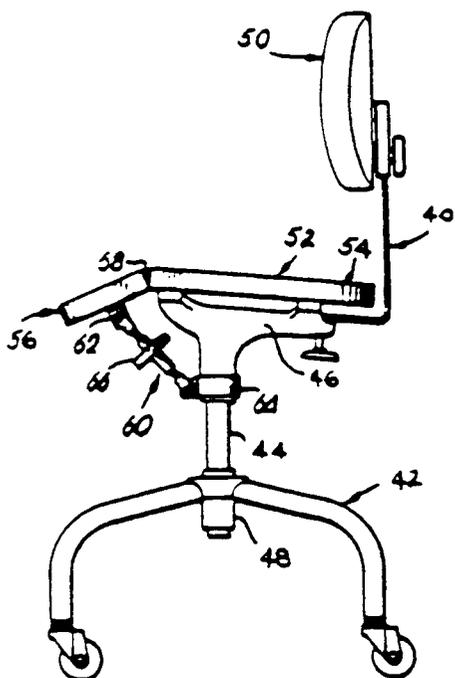


FIG. 3

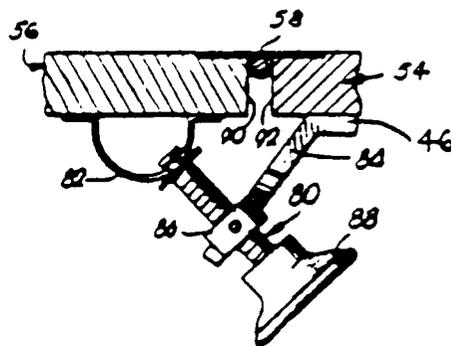


FIG. 4

The chair, indicated generally at 40 includes a base 42 made up of a plurality of legs, with casters normally provided at the lowermost ends of the legs to facilitate movement of the chair. A support column 44 is connected at its lower end to the base 42, and a mounting bracket 46 is connected to the upper end of the support column. The support column 44 is adjustably mounted to the base 42 using a conventional threaded adjustment means 48 to permit vertical adjustment of the seat height. A conventional backrest 50 is provided and the backrest may be attached to either a rear portion of a seat 52 (not illustrated in Fig. 3) or to the mounting bracket 46.

The chair seat 52 of the present invention is made up of a rear portion 54 and a front portion 56. The front portion is swingable relative to the rear portion, whereby the front portion may be inclined angularly downwardly with respect to the rear portion to thereby lessen the upward pressure on the thighs of a user and permit a more comfortable working posture. While rear portion 54 and front portion 56 are of the same width, rear portion 54 is of greater depth and therefore comprises the major area of the overall surface of chair seat 52. The mounting bracket 46 must be substantially rigid and fixed to rear portion 54, thus fixedly supporting the rear portion 54, but permitting controlled swinging movement of the front portion 56 in a downward direction.

The front portion 56 is made of a single length of material and is connected to the rear portion 54 by a hinge 58. The hinge 58 must be attached to the upper surfaces of the front and rear portions whereby the front portion 56 may be swung relative to the rear portion 54 without pinching the clothes or thighs of the user. An adjustment means must be provided between the mounting bracket 46 and the front portion 56 for adjusting the angular position of the front portion 56 relative to the rear portion 54. Two embodiments of the adjustment means are illustrated in FIGS. 3 and 4, respectively.

The first embodiment of the adjustment means is illustrated in FIG. 3 and includes a turnbuckle 60 with an operating knob 66. The turnbuckle 60 is pivotally connected at one end to a first bracket 62. The bracket is attached to the lower surface of the front portion 56. The other end of the turnbuckle 60 is pivotally connected to a second bracket 64. The second bracket 64 is attached to the mounting bracket 46 adjacent the upper end of the support column 44. Upon actuation of the operating knob 66 of the turnbuckle 60, the overall length of the turnbuckle 60 can be decreased, thereby causing the front portion 56 to swing from its initial position wherein it and rear portion 54 are in a common, substantially horizontal plane to a position extending angularly downwardly with respect to the rear portion 54. As can be appreciated, the user of the chair may, by convenient actuation of operation knob 66, create a desired angular inclination of front portion 56.

The second embodiment of the adjustment means is illustrated in FIG. 4. In this embodiment, the mounting bracket 46 includes a forwardly and downwardly extending portion 84 to which an internally threaded bearing 86 is pivotally attached. A U-shaped bracket 82 is attached to the lower surface of front portion 56. The U-shaped bracket 82 includes a slot intermediate the ends of the U which is sized to receive one end of an externally threaded screw 80 for rotation relative to the U-shaped bracket 82. The screw 80 is threadedly received in the bearing 86. An operating knob 88 is attached to the other end of screw 80. Upon rotation of the operating knob 88 in either direction, the front portion 56 is caused to swing about hinge 58 to a selected angularly adjusted position with respect to rear portion 54. As apparent from viewing FIG. 4, the downward swinging movement of front portion 56 is limited in that the rear edge 90 thereof will,

after a predetermined angularity has been achieved, be brought into abutting engagement with front edge 92 of rear portion 54, which serves to stop or limit the relative downward inclination of front portion 56 with respect to rear portion 54. The same is true with the structure shown in FIG. 3 above.

DIRECTIONS: Please place your answers to the following questions in **SECTION 5** of the Answer Sheet.

1. Assume that the following partial claim has been drafted for the invention disclosed above:

Claim 1. A chair comprising

a base,

a support column having an upper end and a lower end,

a substantially rigid mounting bracket fixedly connected to the upper end of said column,

a seat having a front portion and a rear portion, each portion having an upper surface and a lower surface, the lower surface of said rear portion being fixed to said mounting bracket,

the lower end of said column being adjustably mounted to said base to permit vertical adjustment of the height of said seat,

a means for interconnecting said front and rear portions and attached to the lower surfaces thereof, and

Which of the following limitations meets the written description requirement and must be included to avoid the prior art?

- (A) casters attached to the lower most end of said column to facilitate movement of the chair.
- (B) an assembly comprising a spring, bolt, nut, and washer combination for resiliently biasing the front and rear portions of the seat.
- (C) an adjustment means comprising an adjustable screw contained inside said interconnecting means for locking said means in place, whereby the angle of inclination of the front portion may be adjusted and the front portion may be retained in a selected position.
- (D) an adjustment means connecting said front portion to said mounting bracket for adjusting the extent of downward swinging movement of said front portion, whereby the angle of inclination of the front portion may be adjusted and the front portion may be retained in a selected position.
- (E) a backrest connected to said support column for providing back support.

2. Assuming that Claim 1 written in question 1 is complete and particularly points out and distinctly claims the disclosed invention, which of the following dependent claims best further particularly points out one of the two embodiments disclosed?

- (A) 2. A chair according to Claim 1 wherein said backrest is flexible so as to relieve pressure on the thighs of the user and allow the user to rest in a comfortable manner.
- (B) 2. A chair according to Claim 1 wherein said adjustment means comprises a turnbuckle having two ends and an operating knob, one of said turnbuckle ends being pivotally connected to said first bracket, and another turnbuckle pivotally connected to said second bracket, whereby said operating knob may be actuated to create a desired angular inclination of said front portion.
- (C) 2. A chair according to Claim 1 including an adjustment means comprising a first bracket attached to the lower surface of said front portion of the seat, a second bracket attached to said mounting bracket adjacent the upper end of said support column, and a turnbuckle having two ends and an operating knob, one of said turnbuckle ends being pivotally connected to said first bracket, and the other of said turnbuckle ends being pivotally connected to said second bracket, whereby said operating knob may be actuated to create a desired angular inclination of said front portion.
- (D) 2. A chair according to Claim 1 wherein said adjustment means comprises a U-shaped bracket attached to said lower surface of said front portion of the seat, said U-shaped bracket having two ends and including a slot intermediate said U-shaped bracket ends, and said externally threaded screw having two ends and being threadedly received in an internally threaded bearing, one of said screw ends being rotatably received within said U-shaped bracket slot for rotation of said screw relative to said U-shaped bracket and the other of said screw ends being attached to an operating knob, whereby rotation of the operating knob in either direction causes said front portion to swing about said hinge to a selected angularly adjusted position with respect to said rear portion.
- (E) 2. A chair according to Claim 1 wherein said adjustment means comprises a first flange connected to said front portion of said seat, a second flange connected to said second portion of said seat, a bolt running through said first and second flanges, and a spring captured on said bolt so as to resiliently bias the front portion of said seat and thereby relieve pressure on a user's thighs.

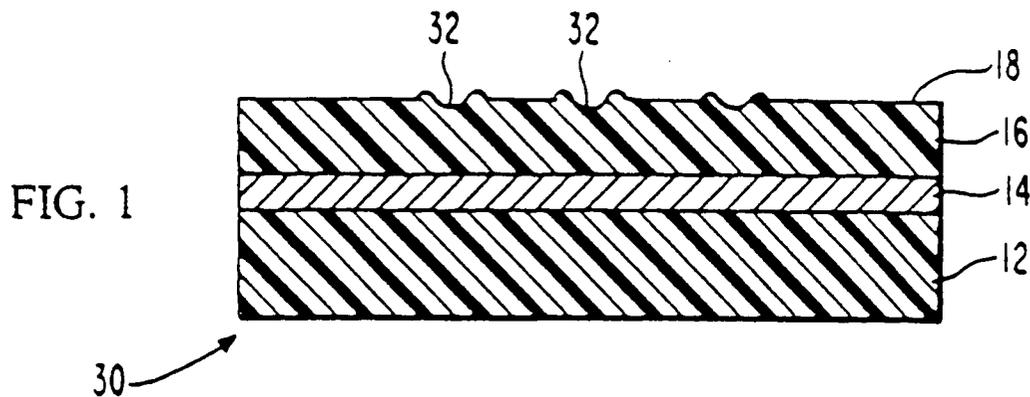
3. Assuming that Claim 1 as written in question 1 is complete and particularly points out and distinctly claims the disclosed invention, which of the following dependent claims best further particularly points out one of the two embodiments disclosed?

- (A) 3. A chair according to Claim 1 wherein the rear portion of the seat is fixedly secured to a backrest.
- (B) 3. A chair according to Claim 1 wherein the rear portion of the seat is fixedly connected to a frame, said frame being fixed to a backrest.
- (C) 3. A chair according to Claim 1 wherein a backrest is fixed to the upper end of said support column.
- (D) 3. A chair according to Claim 1 wherein a backrest is fixed to said base.
- (E) 3. A chair according to Claim 1 wherein the front portion of the seat is connected to the rear seat portion solely through a bracket beneath the seat.

OPTION SECTION 6 - OPTICAL RECORDING MEDIA

Optical recording and reading media enjoy perfect freedom from wear because they do not come into contact with mechanical read and write heads. Information is written on a medium by forming small holes, called pits. The pits are formed by removing or melting off a part of the medium with a recording light, such as a laser. The pits in the recording layer are read by detecting change in the reflection of reading light while rotating the optical recording medium. The recorded information is read by sensing the pits with a reading light.

Fig. 1 illustrates the invention. The optical recording medium 30 includes a substrate 12, a film liner 14, and a recording layer 16. The recording layer contains pits 32 in the outer surface 18 of the recording layer.



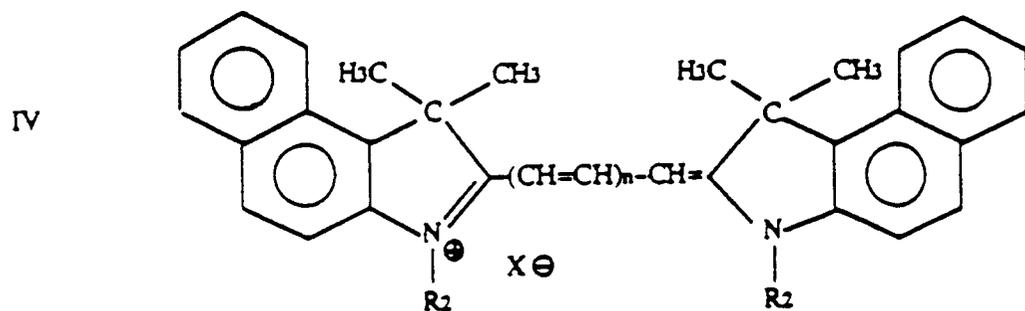
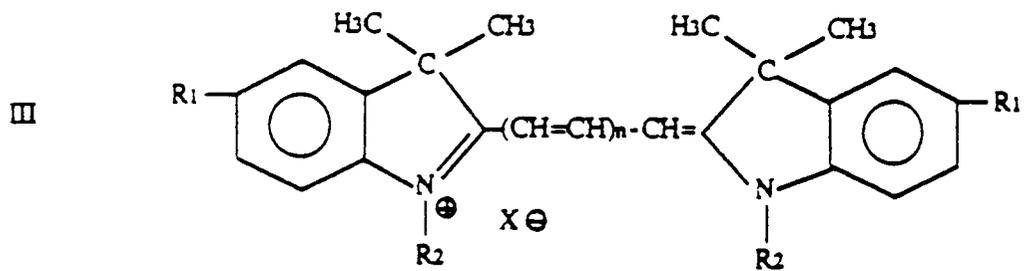
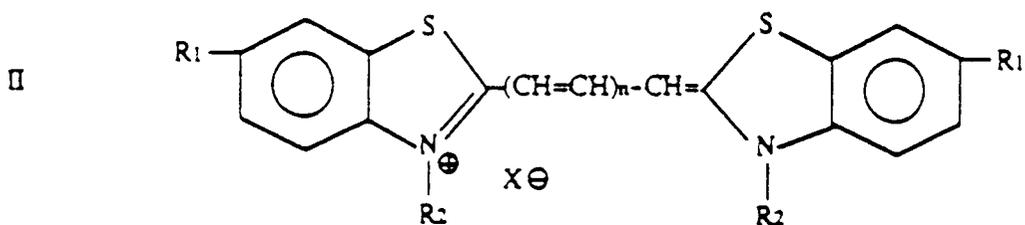
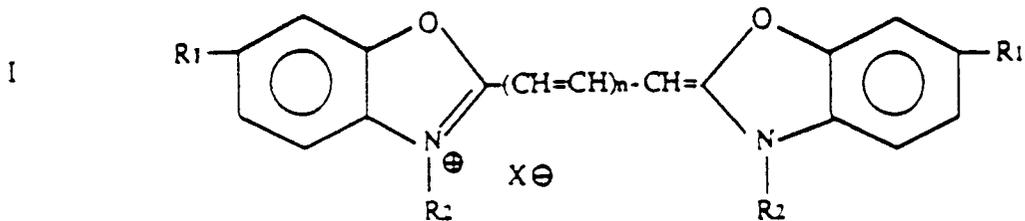
The substrate 12 is not limited to a particular material, so long as it is substantially transparent to write and read light. Examples of such materials include glass, polymethyl methacrylate, acrylic resin, epoxy resin, polycarbonate resin, polysulfone resin, and polyether sulfone. The film liner 14 is formed by vapor depositing an optically transparent film of an inorganic material, such as silicon oxide, titanium oxide, zirconium oxide, aluminum oxide, silicon nitride, or silicon carbide. The film liner provides a barrier to water and gas, and improves the preservation stability of the recording layer.

The recording layer 16 comprises a cyanine dye constituent as the optical recording medium and a quencher, such as a transition metal chelate of a bis(phenyldithiol) compound. The quencher improves the photostability of the cyanine dye by preventing decoloring (reproduction deterioration) caused by reading light. The recording layer is formed by first dissolving the cyanine dye and quencher in an organic solvent, such as ethanol or acetone, applying the solution to the film liner, rotating the substrate to distribute the recording medium over the film liner, and then irradiating the medium with pulses of laser light to form pits in the recording layer surface. The cyanine dye, quencher, and solvent mixture may optionally, but not preferably, include a surfactant, antistatic agent, lubricant, flame retardant, stabilizer, dispersant, antioxidant, and crosslinking agent.

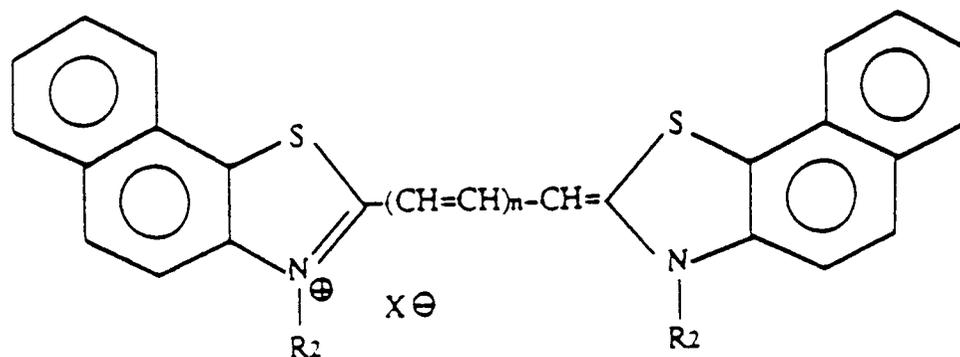
The thickness of the recording layer is in the range of 100 to 1000Å, preferably 300 to 600Å, more

preferably 300 to 500Å. The quencher is contained in the recording layer in an amount of 15 to 50 moles per 100 moles of cyanine dye, preferably 15 to 35 moles of quencher per 100 moles of cyanine dye. The amount of quencher is critical. When more than 50 moles of quencher per 100 moles of dye is used, the sensitivity of the dye rapidly deteriorates. The writing light applied to the recording medium is selected according to the wavelength of light absorbed by the cyanine dye contained in the recording layer. Laser light having a wavelength of 760 to 830Å is preferred.

The cyanine dyes used in the present invention are generally well known. Examples of cyanine dyes suitable for the present invention have the following structural formulas (I through V):



V

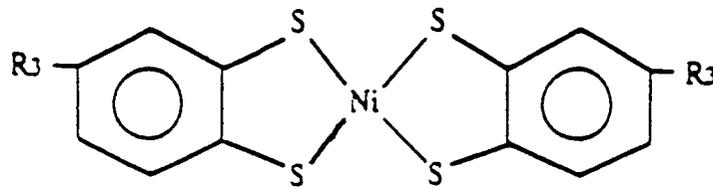


wherein R₁ is hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, or hydrogen; R₂ is unsubstituted alkyl, cycloalkyl, hydroxyalkyl, or alkylyalkyl; X is a halide; and n is 1 to 3.

The following table lists 29 cyanine dyes used in the present invention having one of the aforesaid structural formulas.

Dye No	Formula	R ₁	R ₂	n	X
1	I	H	CH ₃	3	Cl
2	I	H	CH ₂ CH ₃	3	Cl
3	I	H	CH ₂ CH ₂ CH ₃	3	Cl
4	I	H	C ₄ H ₉ CH ₃	3	Cl
5	I	CH ₃	CH ₃	3	Cl
6	II	H	CH ₃	3	Cl
7	II	H	CH ₂ CH ₃	3	Cl
8	II	H	CH ₂ CH ₃	3	Br
9	II	H	CH ₂ CH ₂ CH ₃	3	Cl
10	II	H	CH ₂ CH ₂ CH ₃	3	Br
11	II	H	cyclo-C ₆ H ₁₁	3	Cl
12	II	CH ₃ O	CH ₂ CH ₃	3	I
13	III	H	CH ₃	3	Cl
14	III	Cl	CH ₃	3	Cl
15	III	Cl	CH ₃	3	Br
16	III	H	CH ₂ CH ₃	3	Cl
17	III	phenyl	CH ₂ CH ₂ CH ₃	3	Cl
18	III	Cl	cyclo-C ₅ H ₉	3	Cl
19	III	H	cyclo-C ₅ H ₉	2	Cl
20	III	H	cyclo-C ₅ H ₉	1	Cl
21	III	H	cyclo-C ₆ H ₁₁	3	Cl
22	III	Cl	cyclo-C ₆ H ₁₁	3	Cl
23	III	Cl	cyclo-C ₆ H ₁₁	3	Br
24	III	NO ₂	C ₂ H ₄ OCH ₃	3	Cl
25	III	C ₂ H ₄ OH	CH ₂ CH ₃	3	Cl
26	IV	-	CH ₃	3	Cl
27	V	-	CH ₃	3	Cl
28	V	-	CH ₂ CH ₃	3	Br
29	V	-	CH ₃	3	I

The following is the general formula for the quencher used in the present invention:



wherein R3 represents hydrogen, alkyl, or hydrogen.

The preferred embodiment requires the use of cyanine dyes having structural formulas II and III wherein R2 is an unsubstituted alkyl or cyclo group due to improved solubility of the dye in the solvent. The most preferred embodiment uses cyanine dyes having structural formula III wherein R1 is chlorine and R2 is alkyl or cycloalkyl and 25 to 35 moles of the quencher are used per 100 moles of the cyanine dye. The dyes of the most preferred embodiment have outstanding solubility, and provide outstanding reproduction characteristics and repeated reading characteristics.

THE PRIOR ART

Recording media using cyanine dyes are old in the art. The closest prior art is a patent to Smith issued on August 21, 1989. The patent includes the following disclosure:

FIG. 2

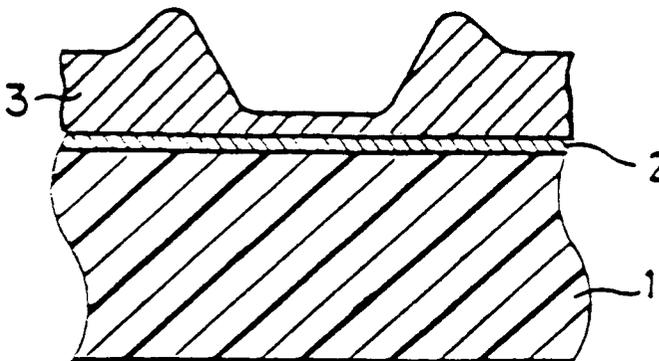
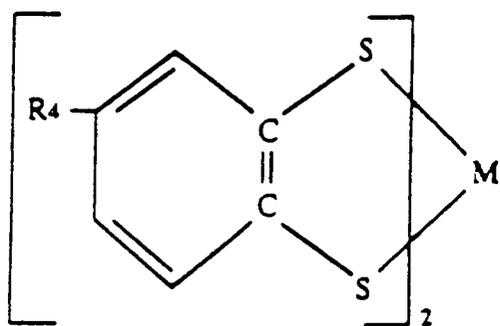
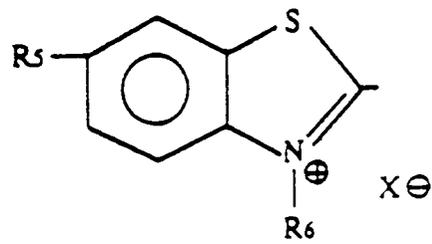
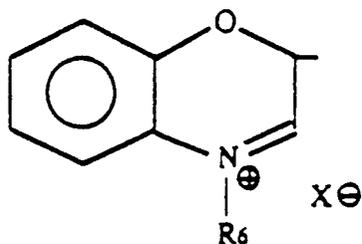
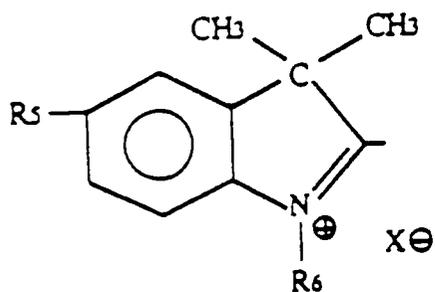


FIG. 2 shows a pitted optical recording medium having a recording layer 3, a dielectric layer 2, and a transparent substrate 1. The substrate 1 can be any material which is transparent to laser light, such as polymethyl methacrylate or polycarbonate. The dielectric layer 2 can be any inorganic material which is optically transparent to laser light, such as silicon dioxide or titanium dioxide. The dielectric layer is deposited by using a conventional vapor deposition technique.

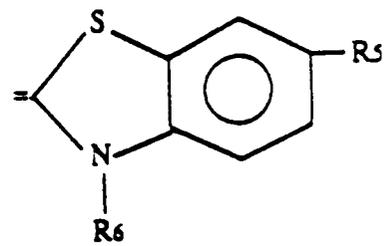
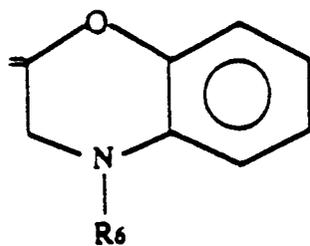
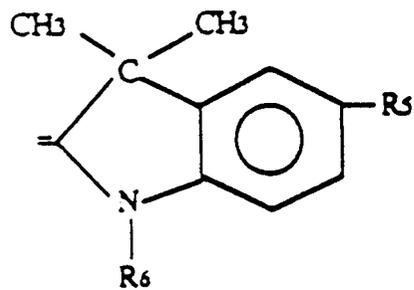
The recording layer 3 is formed by dissolving a cyanine dye and a substituted benzenedithiol chelate in acetone, applying the solution to the dielectric layer, spinning the substrate to spread the cyanine dye mixture over the surface of the dielectric layer, and then irradiating the medium with pulses of laser light to form pits in the recording layer surface. The substituted benzenedithiol chelate used by Smith is disclosed as having the general formula:



wherein M is Pt, Pd, or Ni and R₄ represents hydrogen, an alkyl, or halogen. The cyanine dyes used by Smith are described as A-(CH=CH)_n-CH=B wherein n is 1, 2, or 3, and A is described as being:

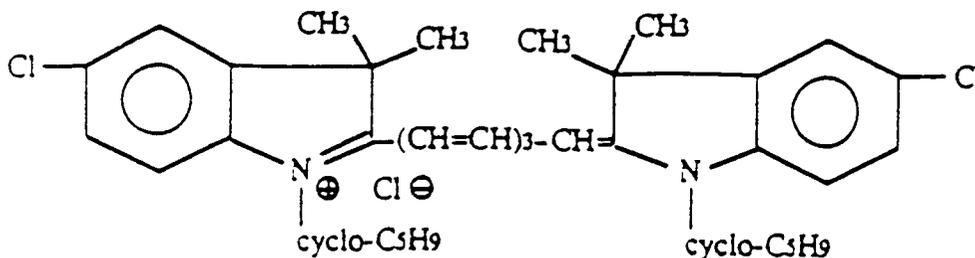


and B is described as being:



wherein R₅ is hydrogen, alkyl, and halogen and R₆ is unsubstituted alkyl or alkoxyalkyl, and X is a halide.

Smith discloses that the thickness of the recording layer 3 is between 300 and 700Å. He also discloses that the substituted benzenedithiol chelate is contained in the recording layer in an amount of 40 to 60 moles per 100 moles of cyanine dye, preferably 55 to 60 moles per 100 moles of dye. Smith's preferred embodiment uses 53 moles of the benzenedithiol chelate per 100 moles of the following cyanine dye:



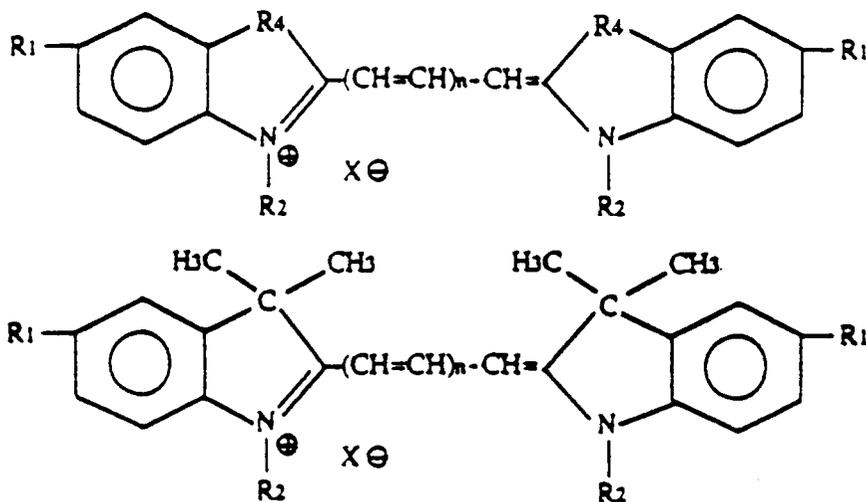
DIRECTIONS: Please place your answers to the following questions in **SECTION 6** of the Answer Sheet.

1. Your client naturally wants the broadest claim possible; however, a potential infringer is rapidly gaining market share and you have been told to "Get this thing issued fast or I'll get another lawyer!" Accordingly, you will file these claims with the specification and want these claims to sail through the PTO with no problems: a first action allowance. Presented below are the first three lines of Claim 1. You are to select one of the choices below which completes the claim, protects the invention, and avoids prosecution problems.

Claim 1. An optical recording medium comprising:

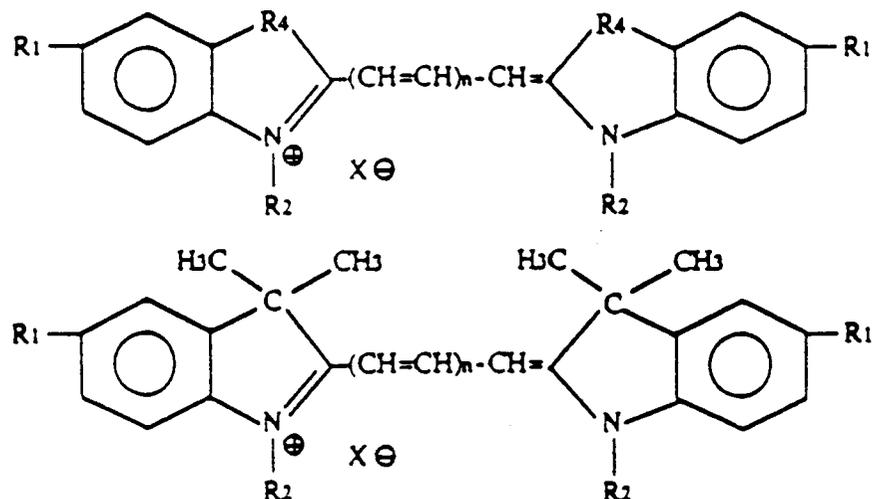
- (i) an optically transparent substrate;
- (ii) an optically transparent layer of inorganic film; and

(A) (iii) a recording layer of said optically transparent layer of inorganic film, said recording layer comprising 25 moles of a quencher per 100 moles of a cyanine dye of the formula:



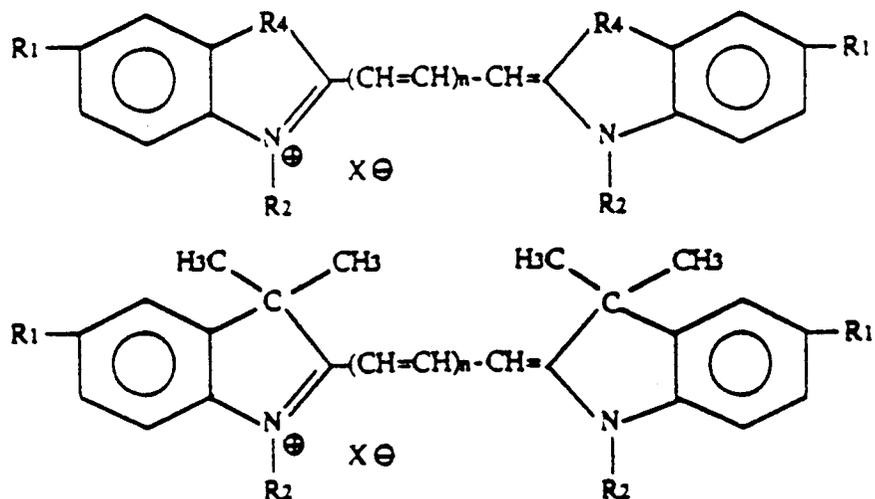
wherein R1 is selected from the group comprising hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, and halogen; R2 is alkyl; X is a halide; R4 is sulfur; and n is 1 to 3.

- (B) (iii) a recording layer of said optically transparent layer of inorganic film, said recording layer comprising 15 moles of a quencher per 100 moles of a cyanine dye of the formula:



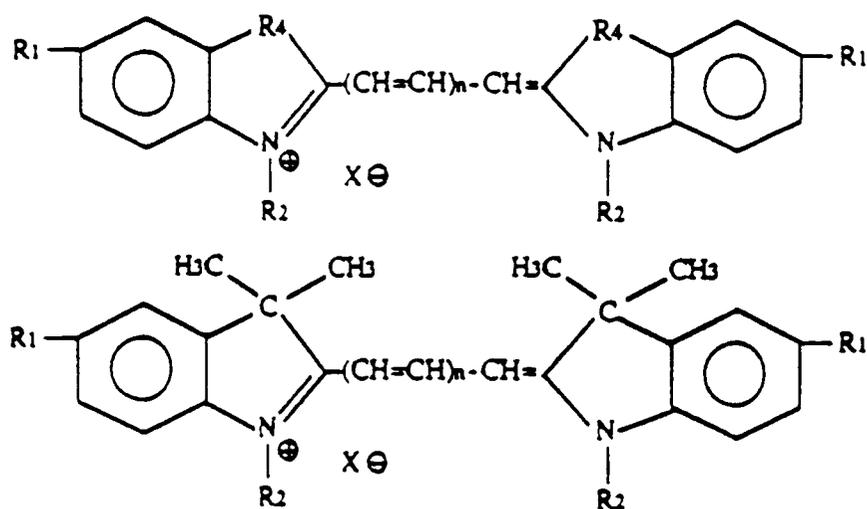
wherein R1 is selected from the group consisting essentially of hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, and halogen; R2 is alkyl; X is a halide; R4 is sulfur; and n is 1 to 3.

- (C) (iii) a recording layer of said optically transparent layer of inorganic film, said recording layer comprising 15 moles of a quencher per 100 moles of a cyanine dye of the formula:



wherein R1 is selected from the group consisting of hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, and halogen; R2 is alkyl; X is a halide; R4 is sulfur; and n is 1 to 3.

- (D) (iii) a recording layer of said optically transparent layer of inorganic film, said recording layer comprising 15 moles of a quencher per 100 moles of a cyanine dye of the formula:



wherein R1 is selected from the group comprising hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, and halogen; R2 is alkyl; X is a halide; R4 is a chalcogen; and n is 1 to 3.

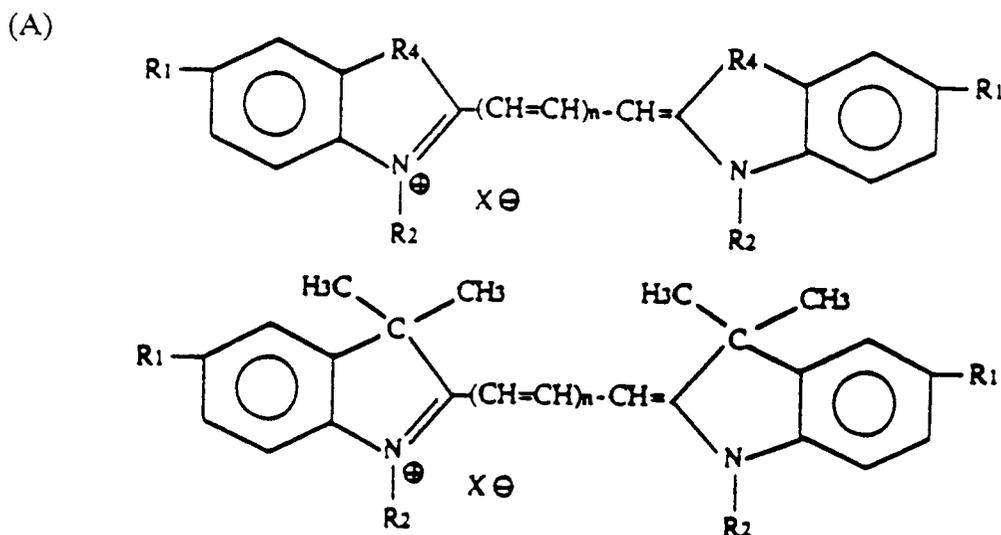
- (E) (A) and (C).

2. You are under the same situation as in question 1. Presented below are the first three lines of Claim 2. You are to select one of the choices below which completes the claim, protects the invention, and avoids prosecution problems.

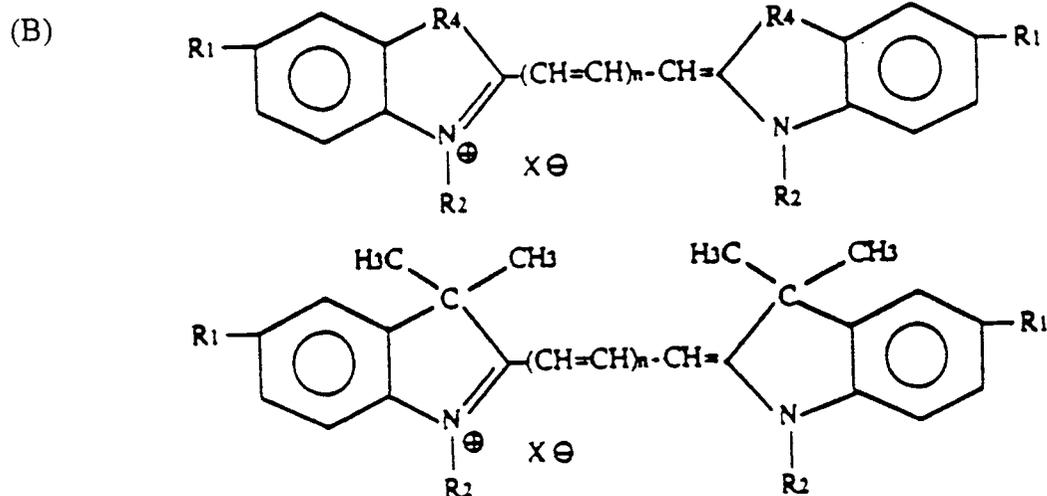
- Claim 2. An optical recording medium comprising:
- (i) an optically transparent substrate;
 - (ii) an optically transparent layer of inorganic film; and
- (A) (iii) a recording layer of said optically transparent layer of inorganic film, said recording layer comprising a cyanine dye and containing 15 to 35 moles of said quencher per 100 moles of said cyanine dye.
 - (B) (iii) a recording layer of said optically transparent layer of inorganic film, said recording layer comprising a cyanine dye wherein said recording layer contains a quencher.
 - (C) (iii) a recording layer of said optically transparent layer of inorganic film, said recording layer comprising 15 to 35 moles of a quencher per 100 moles of a cyanine dye.
 - (D) (iii) a recording layer of said optically transparent layer of inorganic film, said recording layer comprising a cyanine dye wherein said recording layer contains 15 to 35 moles of said quencher per 100 moles of said cyanine dye, preferably 25 to 35 moles of said quencher.
 - (E) (B) and (C).

3. You are under the same situation as in question 1. Presented below are the first two lines of Claim 3. You are to select one of the choices below which completes the claim, protects the invention, and avoids prosecution problems.

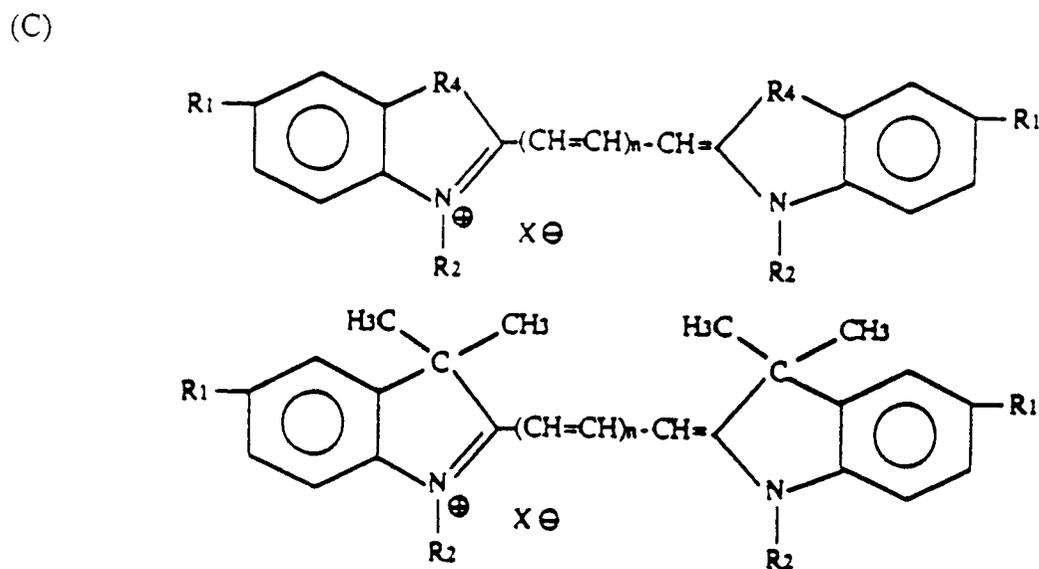
Claim 3. An optical recording medium of claim 2 where the cyanine dye has either of the following formulas:



wherein R1 is selected from the group consisting of hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, fluorine, chlorine, bromine or iodine; R2 is alkyl; X is a halide; R4 is sulfur or oxygen; and n is 1 to 3.

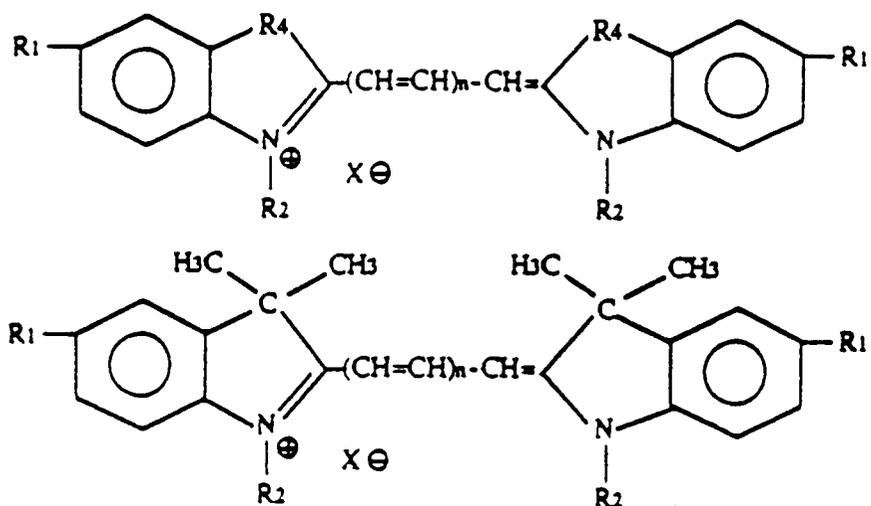


wherein R1 is selected from the group consisting of hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, or halogen; R2 is alkyl; X is a halide; R4 is sulfur; and n is 1 to 3.



wherein R1 is selected from the group consisting of hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, or halogen; R2 is alkyl; X is a halide; R4 is chalcogen; and n is 1 to 3.

(D)



wherein R_1 is selected from the group consisting of hydrogen, unsubstituted alkyl, alkoxy, nitro, aryl, fluorine, chlorine, bromine and iodine; R_2 is alkyl; X is a halide; R_4 is chalcogen; and n is 1 to 3.

(E) (C) and (D).