

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

**AUGUST 26, 1998**

**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 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 and 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. Dr. John Doe, an electrical engineer, was employed by the General Automotive Company, (GAC), to do research on ignition distribution systems for internal combustion engines. In the course of such research, Dr. Doe took a number of samples of rigid metallic manifold casings, and filled them with a variety of yieldable, non-moldable unitary solids having various dielectric properties. After testing many materials including the reaction products of polymerized walnut-shell oil and formaldehyde, and comparing their radio shielding properties, none of which worked, Dr. Doe concentrated his research on what theoretically appeared to be the most promising materials, specifically, the reaction products of polymerized nut-shell oil and formaldehyde. Included in Dr. Doe's subsequent tests were the polymerized oils from the shells of walnuts, peanuts, chestnuts, almonds, and cashews only. In the case of the cashews, Dr. Doe discovered that the dielectric property of the resulting reaction products were such that when utilized in harnesses designed for ignition distribution systems of internal combustion engines the radio shielding property proved outstanding. As patent counsel for GAC, you prepared and filed in the PTO a patent application disclosing the results of Dr. Doe's research including his test data. The application as filed includes a single claim which begins with the following language:

A radio-shielding harness for the ignition distribution system of an internal combustion engine, comprising a rigid metallic manifold casing for enclosing and shielding a plurality of ignition conductors, and . . . .

Which of the following phrases, each of which is described by the specification, when added to the end of the recited claim language is least likely to be rejected under 35 U.S.C. § 112?

- (A) a solid yieldable dielectric material consisting of polymerized nutshell oil substantially filling said casing around said conductors, said material being in a non-moldable state and capable of holding said conductors against movement relative to each other and to the casing.
- (B) a solid yieldable dielectric material consisting of the reaction products of polymerized nut-shell oil and formaldehyde substantially filling said casing around said conductors, said oil selected from the group comprising shells of walnuts, peanuts, chestnuts, almonds, and cashews, and said material being in a non-moldable state and capable of holding said conductors against movement relative to each other and to the casing.
- (C) a solid yieldable dielectric material consisting of the reaction products of polymerized nut-shell oil and formaldehyde substantially filling said casing around said conductors, said oil selected from the group consisting of shells of walnuts, peanuts, chestnuts, almonds, and cashews, and said material being in a non-moldable state and capable of holding said conductors against movement relative to each other and to the casing.
- (D) a solid yieldable dielectric material consisting of the reaction products of polymerized cashew-shell oil and formaldehyde substantially filling said casing around said conductors, said material being in a non-moldable state and capable of holding said conductors against movement relative to each other and to the casing.

- (E) a solid yieldable dielectric material selected from the group comprising the reaction products of polymerized chestnut-shell oil and formaldehyde substantially filling said casing around said conductors, said material being in a non-moldable state and capable of holding said conductors against movement relative to each other and to the casing.

2. Your client has invented a miniature vacuum tube comprising a capacitor having a capacitance of 0.003 to 0.012  $\mu\text{f}$ , preferably 0.006  $\mu\text{f}$ . You draft a patent application directed to your client's invention and satisfying the requirements of 35 U.S.C. § 112. You draft the following independent claim:

1. A miniature vacuum tube comprising a capacitor having a capacitance of 0.003 to 0.012  $\mu\text{f}$ .

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 miniature vacuum tube of Claim 1 wherein the capacitor has a capacitance of 0.006  $\mu\text{f}$ .
- (B) 2. A miniature vacuum tube as in Claim 1 wherein the capacitor has a capacitance of 0.006 to 0.012  $\mu\text{f}$ .
- (C) 2. A miniature vacuum tube as in Claim 1 wherein the capacitor has a capacitance of about 0.003 to 0.011  $\mu\text{f}$ .
- (D) 2. The miniature vacuum tube of Claim 1 wherein the capacitor has a capacitance of between 0.005 and 0.012  $\mu\text{f}$ .
- (E) (C) and (D)

3. 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 of utilizing a filter comprising electrical components, placing a plurality of electrodes on the human body, receiving electrical signals from the electrodes and passing the signal through the filter which comprises electrical components.
- (B) A process of polymerizing an organic compound by combining a catalyst and reactants in a reaction vessel, heating the mixture in the vessel to a high temperature to start the reaction, separating the organic layer from the remaining materials and evaporating the solvent.
- (C) The use of a water repellent paint as a sealant for wooden patio furniture.
- (D) (A) and (B).
- (E) (A), (B), and (C).

4. Star Chemical Corporation retains you to obtain patent protection for their invention relating to improved production of ethylene oxide. You prepare and file a patent application in the PTO having a specification satisfying the requirements of 35 U.S.C. § 112 and the following two claims, which are fully supported by the specification:

1. A process for preparing a silver-supported catalyst for the improved production of ethylene oxide, said process comprising the steps of:

- (a) forming an aqueous solution of silver salt;
- (b) immersing completely in said solution a carrier of inert, porous particles, characterized by an average diameter not larger than 3/16 inch, an average pore diameter of 10 to 70 microns, and a surface area less than one square meter per gram;
- (c) impregnating said particles with said solution;
- (d) separating the impregnated particles from the remainder of said solution;
- (e) drying the separated particles, whereby said silver salt is deposited uniformly throughout the pores of said particles; and
- (f) activating the dried particles by heating them in air at a temperature sufficient to decompose the deposited silver salt.

2. An oxygen-activated catalyst for use in the controlled catalytic oxidation of ethylene to ethylene oxide, said catalyst comprising 5 to 25% by weight of silver, said silver being the thermal decomposition product of a pore solution-deposited silver salt uniformly distributed throughout the pores of inert, porous particles.

Claim 1 is rejected in the first Office Action under 35 U.S.C. § 103 as unpatentable over Able in view of Baker. Claim 2 is rejected under 35 U.S.C. § 103 as unpatentable over Baker. Able discloses a process for producing a catalyst for oxidation of ethylene to ethylene oxide by impregnating a porous carrier with a solution of a silver salt of an organic acid, separating the excess liquid, drying the impregnated carrier, and decomposing the silver salt by direct heat in an inert gas. Baker discloses a method of making an oxygen activated catalyst by coating a carrier with a silver catalyst using a paste or slurry. The silver compound paste is coated on the support, dried and then activated by treating the catalyst in large trays for several hours in a forced draft hot air oven at about 400°C. Baker discloses the physical characteristics of the oxygen-activated catalyst. The physical characteristics of the claimed catalyst are indistinguishable from Baker's catalyst.

Which of the following represents the best course of action to overcome the rejection and obtain a Notice of Allowance in the application?

- (A) Cancel Claim 1 and argue that the inventive catalyst has both high selectivity, i.e., a measure of the ability of a catalyst to prefer the partial oxidation reaction of ethylene over the total oxidation reaction of ethylene to carbon dioxide, and high productivity, i.e., a measure of the amount of ethylene oxide produced per unit of catalyst and per unit of time.
- (B) Cancel Claim 2 and argue that the combination of references is improper because it would not have been obvious to one of ordinary skill in the art to substitute the activation step of Baker for the activation step of Able.
- (C) Amend Claim 1 to recite that an oxidizing agent is added to the solution to prevent premature reduction of the silver salt.
- (D) Cancel Claim 1 and amend Claim 2 to recite that the inert, porous particles contain silica-alumina, and argue that such recitation is not disclosed by the references.
- (E) Cancel Claim 1 and argue that the combination of references is improper because it would not have been obvious to one of ordinary skill in the art to substitute the activation step of Baker for the activation step of Able.

5. X invented a laminate containing a transparent protective layer and a light-sensitive layer, without an intermediate layer. The prior art included a laminate containing a transparent protective layer and a light-sensitive layer held together by an intermediate adhesive layer. Which of the following is a proper claim that would overcome a 35 USC § 102 rejection based on the prior art?

- (A) 1. A laminate comprising a transparent protective layer and a light-sensitive layer.
- (B) 1. A laminate comprising a transparent protective layer and a light-sensitive layer which is in continuous and direct contact with the transparent protective layer.
- (C) 1. A laminate comprising a transparent protective layer and a light-sensitive layer, but not including an adhesive layer.
- (D) (A) and (B).
- (E) (B) and (C).

6. Egghead filed a patent application on subject matter pertaining to a method of producing a completely hardened metal structural element, such as a roller bearing race. The invention is directed to separating one bearing race from another in the production process. The specification discloses that the method consists essentially of the steps of (1) subjecting the surface of the element along an intended course of fracture to direct high energy radiation, such as a laser beam, to selectively embrittle the metal, and (2) then splitting the element along the intended course of fracture, e.g., by a chilling process, such as quenching, or putting the surface subjected to radiation under tensile stress by applying a force to the structural element to generate the fracture, thereby forming separate bearing races. The specification does not include a definition of the language "completely hardened metal structural element," and notes that the surface of the structural element may be provided with a groove along at least a portion of the intended course of the fracture, but that the groove is not provided to influence the course of the fracture, and hence, in contrast to known methods, it is unnecessary to form the groove as a sharp-edged notch.

In the course of prosecution, the examiner issued an Office Action rejecting claims 6 and 10, the remaining claims in the case, as anticipated by Highbrow under 35 U.S.C. § 102(b). The Highbrow patent teaches a method of producing a metal structural element by irradiating the surface of such element with high energy radiation along an intended course of fracture which has been provided with a sharp-edged notch, and then splitting the element along the intended course of fracture by quenching.

The claims are as follows:

6. A method of fracturing a completely hardened metal structural element, said method consisting essentially of subjecting the surface of the completely hardened structural element at least along a portion of an intended course of fracture and in transverse limitation thereto to a high energy radiation to selectively embrittle the metal, and then splitting the element along the intended course of fracture by a chilling process.

10. The method of Claim 6 comprising providing the surface of the completely hardened metal structural element along at least a portion of the intended course of fracture with a groove, and subjecting said element to said high energy radiation.

Which of the following actions should Egghead take that accords with proper PTO practice and procedure and stands the best chance of overcoming the examiner's rejection?

- (A) Traverse the rejection and argue that Highbrow does not teach the application of "direct" high energy radiation as taught by Egghead.
- (B) Traverse the rejection and argue that the language "consisting essentially of" recited in Claim 6 excludes the "notching" step taught by Highbrow.

- (C) Amend Claim 6 by deleting the language "by a chilling process" at the end of the claim and traverse the rejection by arguing that Claim 6 no longer reads on Highbrow's "quenching" step.
- (D) Traverse the rejection and argue that the language "a completely hardened metal structural element" recited in Claim 6 would be interpreted by one of ordinary skill in the art as defining a metal element which is completely crystalline throughout its structure and that the metal element disclosed by Highbrow does not possess this crystalline structure.
- (E) Amend Claim 6 by deleting the language "a chilling process" of the claim and, after "fracture by" in line 5, inserting the language "putting the surface subjected to radiation under tensile stress by applying a force to the structural element to generate the fracture." Traverse the rejection on the ground that Highbrow does not teach this step and that his quenching step is not equivalent thereto.

7. Inventor Jones received a patent that, through error and without deceptive intent, failed to describe an embodiment of her invention. Eighteen months after the patent was issued, you filed a complete reissue application adding a claim directed to the omitted embodiment, together with Jones' declaration explaining the error, and the other required papers. In accordance with PTO practice and procedure,

- (A) The claim is subject to a rejection under 35 U.S.C. § 132.
- (B) The specification is subject to an objection as failing to provide proper antecedent basis for the claimed subject matter and require correction.
- (C) The claim is subject to a rejection under 35 U.S.C. § 251 and a rejection under 35 U.S.C. § 112, first paragraph.
- (D) The claim is allowable.
- (E) (B) and (D).

8. A patent application describes an improved cat litter tray, preferably rectangular in shape, and includes drawings depicting such a tray having a major axis and a minor axis and adapted to hold a layer of cat litter. The specification describes and the drawings depict a removable igloo-like cover mated with at least two sides of the tray in a friction fit manner and containing an opening at each end of the cover parallel to the minor axis of the tray adapted for ingress and egress of a cat. The essential feature described in the specification and depicted in the drawings resided in a screen, pivotally affixed to opposing sides of the tray parallel to the major axis of the tray at points above the cat litter. In operation, as described in the specification, a cat would enter the device through one of the openings in the igloo-like cover stepping upon the screen, preferably wire mesh. The weight of the cat would cause the screen to pivot downward until it contacted the layer of cat litter. Following urination, the cat would egress from the device through a cover opening, the urine having passed through the wire mesh screen to be absorbed by the cat litter, and the cat having egressed without carrying any litter to be tracked into the surrounding area. During the day, ingress and egress from the opposing cover openings would result in the pivotally affixed wire mesh screen being subjected to a see-saw action, essential to break up and disintegrate dried fecal matter, thus permitting the matter to pass through the screen to the litter below. Reference numerals assigned to the elements and shown in the drawings were as follows: tray 10, screen 15, cover 20 . . . .

Which of the following claim phrases accord(s) with PTO practice and procedure regarding the form of claims?

- (A) An improved cat litter tray comprising a tray 10, a screen 15, a cover 20 . . . .
- (B) An improved cat litter tray comprising a tray (10), a screen (15), a cover (20) . . . .
- (C) An improved cat litter tray comprising a tray, a screen, a cover, . . . .
- (D) A and B
- (E) B and C

9. In the course of prosecuting a patent application before the PTO, you receive a non-final Office action allowing Claim 1, and rejecting Claims 2 through 6, the remaining claims in the case.

Claim 1 reads as follows:

1. A ship propeller exhibiting excellent corrosion resistance, said ship propeller consisting essentially of a copper base alloy consisting of 2 to 10 percent tin, 0.1 to 0.9 percent zinc, and copper.

The specification of the application teaches that the copper base alloy made with the addition of 2 to 10 percent aluminum increases the alloy's wear resistance without detracting from its corrosion resistance. However, adding aluminum to the surface of the propeller does not increase wear resistance. Which of the following claims, if any, if added by amendment would accord with proper PTO practice and procedure?



- (A) 7. A copper base alloy according to Claim 1 wherein said alloy includes 2 to 10 percent aluminum.
- (B) 7. A ship propeller according to Claim 1 including the step of adding 2 to 10 percent aluminum to the copper base alloy.
- (C) 7. A ship propeller according to Claim 1 including 2 to 10 percent aluminum.
- (D) 7. A ship propeller according to Claim 1 wherein said alloy includes 2 to 10 percent aluminum.
- (E) None of the above.

10. Applicant claims the following container lid combination:

- 1. A dispensing top for passing only several candy pieces at a time from an open ended container filled with candy, having a generally conical shape and an opening at each end, the opening at the reduced end allows several pieces of candy to pass through at the same time, and means at the enlarged end of the top embrace the open end of the container, the taper of the top being such that only a few pieces of candy are dispensed when the top is mounted on the container and the container is turned over.

The prior art reference X teaches a conically shaped funnel that can be secured on top of a can containing motor oil, such that the contents are dispensed when the can is turned on its side. X also mentions that it can be used for solid materials. The claim was rejected as anticipated by X under 35 U.S.C. § 102. Which of the following replies to the rejection would be most likely to result in issuance of Claim 1?

- (A) Traversing the rejection on the ground that X is nonanalogous art, and therefore cannot be used for anticipation purposes against Claim 1.
- (B) Traversing the rejection on the ground that X does not specifically teach dispensing of candy pieces like Claim 1.
- (C) Amending Claim 1 to add specific limitations to the dimensions of the dispensing top.
- (D) All of the above.
- (E) None of the above.

11. While researching heart disease, Dr. Able developed a process for preparing compounds which exert "strongly saluretic [sodium expelling] and diuretic [water expelling] effects." Dr. Able found that these compounds were useful also in the treatment of heart conditions and hypertension. Dr. Able's compounds are substituted dihydrobenzothiadiazines having an "R" group at position 3 of the benzothiadiazine nucleus wherein R is selected from the group consisting of phenyl, benzyl, and phenethyl. You prepare a patent application on Dr. Able's invention and file the application in the PTO on August 5, 1996. The sole original claim is as follows:

A substituted dihydrobenzothiadiazine compound wherein the only variable is an "R" group at position 3 of the benzothiadiazine nucleus, said "R" group being selected from the group consisting of phenyl, benzyl, and phenethyl, and said compound exerting strong saluretic and diuretic effects and being useful in the treatment of heart conditions and hypertension.

In the first Office action, the claim is rejected under 35 U.S.C. § 102(e) as unpatentable over the Baker patent, which issued June 25, 1998 on an application filed May 13, 1996. The Baker specification states that it is "a continuation-in-part application of my application Serial No. 123,456, filed September 29, 1995 (now abandoned)." The Baker patent relates to processes for preparing compounds having a generic formula which includes within its scope substituted dihydrobenzothiadiazine compounds, and a list of appropriate substituents disclosed by the Baker patent includes the compounds of Dr. Able's claim. One of the processes disclosed by Baker in the patent and in application '456 for preparing the compounds is identical to Dr. Able's process in all material respects. The '456 application discloses several closely related processes for preparing compounds having a generic formula identical to that disclosed in the issued patent. But the '456 application contained an even broader disclosure. Comparison of the generic disclosure and the nature of the substituents on the benzothiadiazine nucleus as disclosed in the Baker patent and the '456 application reveals that they both disclose the "R" group as including hydrogen, trifluoromethyl, benzyl, or phenethyl. In rejecting Dr. Able's claim, the examiner placed emphasis on Example 2 of the '456 application, particularly, the last paragraph, which stated that other reagents may be used in the preparation process employed in Example 2, and identified specific reagents, which if used would result in each of the compounds of Dr. Able's claim, i.e., compounds wherein the "R" group was phenyl, benzyl, or phenethyl. In reply to the Office action, you file an amendment limiting the variable of Dr. Able's claim to one of the following "R" groups. Which one is most likely to overcome the rejection?

- (A) phenyl
- (B) benzyl
- (C) phenethyl
- (D) trifluoromethyl
- (E) None of the above

12. Jones, a graduate student at ABC University, while engaged in a research project funded by a grant from a Fortune 500 company, conceived an invention for creating a smooth waveform display in a digital oscilloscope. After building and successfully testing the invention, Jones, pursuant to the grant instrument, assigned the invention rights to the Fortune 500 company. As patent counsel for the company, you prepared and filed a patent application directed to the invention. The application contains the following claim which is the sole claim in the application:

A rasterizer for converting vector list data representing sample magnitudes of an input waveform into anti-aliased pixel illumination intensity data to be displayed on a display means comprising:

- (a) means for determining the vertical distance between the endpoints of each of the vectors in the data list;
- (b) means for determining the elevation of a row of pixels spanned by the vector;
- (c) means for normalizing the vertical distance and elevation; and
- (d) means for outputting illumination intensity data as a predetermined function of the normalized vertical distance and elevation.

The specification in the application describes specific structure corresponding to each of the means for performing a specified function recited in the claim.

Which of the following statements best characterizes the claim?

- (A) The claim reads on a digital computer means to perform the various steps under program control. Thus, it is proper to treat the claim as if it is drawn to a method.
- (B) The claim as a whole is directed to a mathematical algorithm.
- (C) The claim is directed to nonstatutory subject matter because during examination the means clauses are given their broadest interpretation and limitations in the specification are not imputed into the claim.
- (D) The claim as a whole is directed to a machine.
- (E) The claim is directed to nonstatutory subject matter because it is written completely using means clauses which are read broadly in the PTO to encompass each and every means for performing the recited functions. Thus, the claim is a process claim wherein each means clause represents a step reciting a mathematical operation, which steps combine to form a mathematical algorithm for computing pixel information. When the claim is viewed without the steps of this mathematical algorithm, no other elements or steps are found.

13. A's patent specification discloses a personal computer comprising a microprocessor and a random access memory. There is no disclosure on the specification of a minimum amount of storage for the random access memory. In the preferred embodiment the microprocessor has a clock speed of 100-200 megahertz. The application originally included the following Claims 11 and 12 (among others), and Claim 13 was added by amendment after an office action:

11. A personal computer comprising a microprocessor and a random access memory including at least ½ gigabyte of storage.

12. The personal computer of Claim 11, in which the microprocessor has a clock speed of 170-200 megahertz.

13. The personal computer of Claim 12, in which the random access memory is greater than 1 gigabyte of storage.

Which of the following statements is or are true about the claims with respect to 35 U.S.C. § 112, fourth paragraph?

- (A) Claim 11 is a proper independent claim.
- (B) Claim 12 is a proper dependent claim.
- (C) Claim 13 is a proper dependent claim.
- (D) Claim 13 is an improper dependent claim.
- (E) (A), (B), and (C).

14. X received a patent on a satellite communications system, and has engaged you to advise her on seeking reissue with the following amended Claim 1:

1. A low orbit satellite communications system [for mobile terminals], wherein the communications antenna system of each satellite provides isoflux coverage made up of a plurality of [elongated] fan beams that are elongated in the travel direction of the satellite.

The amended claim is supported by the original disclosure in X's patent. X is concerned about the applicability of reference A. During the original prosecution, the examiner rejected original Claim 1 as anticipated by A, but then the examiner changed her mind and allowed original Claim 1 over A. X is concerned that infringers of the patent will contend, as a defense to patent infringement, that original Claim 1 is in fact anticipated by A. X is also concerned that amended Claim 1, above, also is arguably anticipated by A.

Which of the following statements is (are) true?

- (A) X may properly present amended Claim 1 in a reissue application filed at any time during the patent term.
- (B) As long as X files her reissue application within two years of the issuance of X's patent, X may properly present amended Claim 1 at any time during the prosecution of the reissue application or any continued prosecution applications arising from the reissue application, and no intent to broaden the claims was indicated in the oath or declaration within the two year period.
- (C) As long as X files her reissue application within two years of the issuance of X's patent, X may properly present amended Claim 1 at any time during the prosecution of the reissue application, but X may not properly present amended Claim 1 for the first time in a continued prosecution application arising from the reissue application unless X also filed that application within two years of the issuance of X's patent, and no intent to broaden the claims was indicated in the oath or declaration within the two year period.
- (D) Since the examiner considered reference A during the original prosecution of X's patent, but then allowed Claim 1, the examiner cannot apply reference A during the reissue proceeding to reject any claim that is narrower than original Claim 1.
- (E) None of the above.

15. You have filed a complete plant patent application claiming a distinct and new plant variety, and claiming a method for obtaining the plant variety. Which, if any, of the following statements are false?

- (A) You may not amend the application to add additional description of the plant variety not contained in the original application, even if consistent and related to the original description and photograph of the plant.
- (B) The examiner may properly require you to deposit an adequate sample of the plant variety with an acceptable depository, and reject the claims under 35 U.S.C. § 112 pending the deposit.
- (C) The examiner may properly require you to elect which of the claims you want examined for ultimate issuance as the single claim to which you are entitled.
- (D) All of the above.
- (E) None of the above.

16. An original claim in a patent application to a mechanical arts invention recites the limitation of "a screw" which is shown in an original application drawing. However, "a screw" does not appear in the original written description part of the application. Which of the following is correct?

- (A) The written description may not be properly amended to include "a screw."
- (B) The claim is indefinite with respect to "a screw."
- (C) The application lacks an enabling disclosure as to "a screw."
- (D) The claim is definite with respect to "a screw."
- (E) The application fails to set forth the best mode for "a screw."

17. For a certain chemical composition, the original written description sets forth a range of "35% - 80%" and specific examples of "40%" and "65%." A corresponding claim includes the limitation, added by amendment, of "at least 42%." There is no other range or specific example disclosed in the application. Which of the following is correct?

- (A) The claim limitation is indefinite.
- (B) The claim limitation is not supported by the written description.
- (C) The disclosure is enabling with respect to the claim limitation.
- (D) The claim limitation is within the scope of "35%- 80%" in the written description.
- (E) The inventor has concealed the best mode.

18. The claims of an application limit a scanning device as having a specific angular view. A patent issues. One year after the patent issued, the patentee filed a reissue application with all required papers. As filed, the claims in the reissue application are amended to remove the limitations directed to the specific angular view. Which of the following is correct?

- (A) The patentee may not broaden his claims through reissue by removing the limitations directed to the specific angular view.
- (B) Since the patentee is removing a limitation, the claim is being narrowed.
- (C) The patent may not be modified after issuance.
- (D) The patentee may broaden claims through reissue by removing the limitation directed to the specific angular view.
- (E) The Patent and Trademark Office may not allow broader claims during reissue.

19. A claim limitation reads "a pH range between 7 and 12, preferably between 9 and 10." Which of the following is correct?

- (A) Since the limitation properly sets forth outer limits, it is definite.
- (B) As long as the limitation is supported in the written description, it is proper.
- (C) The limitation is indefinite.
- (D) Since the limitation sets forth a preferred range, it is definite.

- (E) An applicant is precluded from expanding the claim coverage beyond a pH range of 7-12 under the doctrine of equivalents.

20. With regard to an art or technology that is considered to be unpredictable, which of the following is correct?

- (A) A patent cannot issue because the art is unpredictable.  
(B) Claims in an application need more detail than usual in order to be definite.  
(C) An applicant has an option as to which mode of the invention to set forth.  
(D) An applicant must pay a higher filing fee.  
(E) A written description needs more detail as to how to make and use the invention in order to be enabling.

21. Which of the following claim phrases may be used in accordance with proper PTO practice and procedure?

- (A) R is selected from the group consisting of A, B, C, or D.  
(B) R is selected from the group consisting of A, B, C, and D.  
(C) R is selected from the group comprising A, B, C, and D.  
(D) R is selected from the group comprising A, B, C, or D.  
(E) R is A, B, C, and D.

22. Which of the following claims is (are) not in proper format?

- (A) A device for cooking small pieces of food comprising a basket including a mesh made of a material suitable for cooking small pieces of food, said mesh comprising a bottom, a rear wall, a front wall, and two side walls, wherein the two side walls are joined to the front and rear walls and the rear wall is higher than the front wall such that the entire device fits completely within conventional covered outdoor barbecue grills and such that the higher rear wall facilitates turning over the small pieces of food when the device is shaken.  
(B) A mesh basket for cooking food comprising a bottom, a rear wall, a front wall, and two side walls, wherein the side walls are joined to the front and rear walls and the rear wall is higher than the front wall such that the entire basket fits completely within conventional covered outdoor barbecue grills.  
(C) A device for grilling small pieces of food comprising a bottom, a rear wall, a front wall, and two side walls, wherein the two side walls are joined to the front and rear walls and the rear wall is higher than the front wall, and wherein the walls are made of a mesh material suitable for cooking or grilling small pieces of food.  
(D) (A) and (B).  
(E) None of the above.

23. Which of the following statements is (are) true?

- (A) A claim may not be dependent on any claim which is itself a dependent claim.
- (B) A dependent claim may not contain means-plus-function limitations.
- (C) A dependent claim will always be infringed by any device that would also infringe the base claim from which it depends.
- (D) Any dependent claim may be re-drafted as an independent claim.
- (E) All of the above statements are true.

24. Which of the following is not a PTO recommendation or requirement?

- (A) Claims should be arranged in order of scope so that the first claim presented is the least restrictive.
- (B) Product and process claims should be separately grouped.
- (C) Every application should contain no more than three dependent claims.
- (D) A claim which depends from a dependent claim should not be separated from that dependent claim by any claim which does not also depend from the dependent claim.
- (E) Each claim should start with a capital letter and end with a period.

25. Which of the following is false?

- (A) The meaning of terms in a claim should be ascertainable by reference to the description in the specification.
- (B) While a term used in a claim may be given a special meaning in the description, no term may be given a meaning repugnant to the usual meaning of the term.
- (C) Trademarks may be used in claims only if each letter in the trademark is capitalized.
- (D) Claims may not contain tables or chemical or mathematical formulas.
- (E) Figures may be incorporated by reference in the claims.

26. The claim below is incomplete because it is missing limitation (iii).

A seating device comprising:

- (i) a base member having four parallel edges, and opposing first and second sides;
- (ii) a back member connected to one of the edges of the base member forming a right angle with said first side;
- (iii) \_\_\_\_\_



(iv) a pair of arm members connected to said back member and said first and second leg members, wherein said arm members are capable of supporting the arms of a person sitting in the seating device.

Of the following choices, which would be the best to complete the claim by providing the missing limitation (iii)?

- (A) a set of leg members connected to the second side of said base member;
- (B) a first pair of leg members connected to the second side of said base member at the same edge as the back member, and a second pair of leg members connected to the opposite edge of said support member;
- (C) first, second, third, and fourth leg members connected to said underside of said base member;
- (D) first, second, third, and fourth leg members connected to said second side of said base member, each edge having a leg member adjacent to said edge, wherein said leg members are parallel to each other;
- (E) first, second, third, and fourth leg members connected to said corners of said second side of said base member;

27. Applicant filed a patent application claiming a polyester. The application discloses that the claimed polyester having structural formula R-R' is used to form a stain resistant fabric. The examiner properly rejected the claims as unpatentable over prior art disclosing the claimed polyester having structural formula R-R' and its use to form various fabrics. Given the fact that applicant's specification discloses that the polyester 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 polyester having structural formula R-R' used to form a stain resistant fabric, the polyester being produced by the process comprising the steps A, B, C, and D.
- (B) A polyester-producing process comprising steps A, B, C, and D, said process resulting in a polyester having structural formula R-R' capable of forming a stain resistant fabric.
- (C) A polyester produced by the process comprising the steps A, B, C, and D.
- (D) A polyester comprising the resultant product of steps A, B, C, and D.
- (E) A polyester produced by the process comprising the steps A, B, C, and D, said polyester used to form a stain resistant fabric and having structural formula R-R'.

The following two questions are related:

28. Your client comes to you with a new ornamental design for a bowling pin. Which of the following would be proper claim language for your client's design?

- (A) "The ornamental design for a bowling pin."
- (B) "The ornamental design for a bowling pin as shown and described."
- (C) "The ornamental design for sports equipment as shown."
- (D) "A unique configuration and surface ornamentation for a bowling pin."
- (E) None of the above because bowling pins are functional and not ornamental.

29. Your client's bowling pin includes both a unique functional structure and unique surface ornamentation. You decide that it would be beneficial to protect the unique structure and the unique surface ornamentation separate and apart from one another. Which of the following would be an appropriate action for separately protecting the unique functional structure of the bowling pin?

- (A) Draft a dependent claim covering the unique functional structure and file it in the same design application as the claim covering the entire design of the bowling pin.
- (B) File a separate utility application claiming only the unique functional structure of the bowling pin.
- (C) File a separate design application claiming only the unique surface ornamentation of the bowling pin.
- (D) File a separate utility application claiming a unique method for making a wooden bowling pin having the unique functional structure.
- (E) None of the above.

30. Which of the following requirements of 35 U.S.C. § 112 do NOT apply to design patent claims?

- (A) The written description requirement of the first paragraph.
- (B) The best mode requirement of the first paragraph.
- (C) The requirement in the second paragraph to distinctly claim the subject matter which the applicant regards as his invention.
- (D) The requirement in the third paragraph for an independent claim.
- (E) None of the above.

31. Which of the following is not required in a provisional application?

- (A) The written description of the invention.
- (B) The best mode contemplated by the inventor for carrying out his or her invention.
- (C) One or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- (D) The manner and process of making and using the invention.
- (E) None of the above.

32. Applicant's patent application is directed to a light sensitive dental reconstruction compound comprising a polymer and non-reactive metal blend having a set point activated by ultraviolet light. The polymer 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 polymer being monomer Y. Set point is defined as the phase change when the amorphous polymer transforms to a hard, rigid, enamel-like state from a soft, flexible, rubbery state. The set point is directly related to the types of monomer selected and monomer proportions selected. A prior art reference properly cited against the application discloses a dental reconstruction compound comprised of polymer and non-reactive metal blends made from the same monomers, and the same proportions as that disclosed by applicant. The prior art reference does not disclose the method of inducing a set point by exposing the compound to ultra-violet light. The reference compositions are disclosed as being used in veterinary dentistry. Which of the following claims, if any, is (are) patentable over the reference?

- (A) A light sensitive dental reconstruction compound comprising a polymer and non-reactive metal blend, said polymer comprising at least 60% by weight monomer X, and at least 0.1% by weight monomer Y, wherein a set point is induced using ultra-violet light.
- (B) A light sensitive dental reconstruction compound comprising a polymer and non-reactive metal blend, said polymer comprising 74% by weight monomer X, and the balance monomer Y, wherein a set point is induced using ultra-violet light.
- (C) A dental reconstruction compound comprising a polymer and non-reactive metal blend, said polymer comprising 79% by weight monomer X, and the balance monomer Y, wherein a set point is induced using ultra-violet light.
- (D) (A) and (B).
- (E) None of the above.

33. Which, if any, of the following claims is (are) improper?

- (A) A gadget as in any one of the preceding claims, in which . . . .
- (B) A gadget according to Claims 3 and 4, further comprising . . . .
- (C) A gadget according to Claims 1-3, in which . . . .
- (D) A gadget according to Claim 3 or 4, further comprising . . . .
- (E) (B) and (C)

34. A multiple dependent claim may not properly depend upon:

- (A) an independent claim.
- (B) claim dependent on a single claim.
- (C) a claim which is dependent from a multiple dependent claim.
- (D) a claim containing Markush language.
- (E) (C) and (D).

35. Given the following information regarding three claims:

- (i) A claim refers to "said lever" where the claim contains no earlier recitation or limitation of a lever;
- (ii) A claim initially refers to "an aluminum lever," and "a plastic lever" and thereafter refers to "said lever"; and
- (iii) A claim initially refers to a "controlled stream of fluid" and thereafter refers to "the controlled fluid,"

which of the following statements is correct?

- (A) The claims in (i), (ii) and (iii) are all definite.
- (B) The claims in (i) and (ii) are definite; and the claim in (iii) is indefinite.
- (C) The claim in (i) is indefinite; and the claims in (ii) and (iii) are definite.
- (D) The claims (i) and (ii) are indefinite; and the claim in (iii) is definite.
- (E) The claims in (i), (ii) and (iii) are all indefinite.

36. Which of the following statements is true?

- (i) An applicant cannot use a patent to prove the state of the art for the purpose of the enablement requirement if the patent has an issue date later than the effective filing date of the application.
  - (ii) A publication dated after the effective filing date of an application may be properly used to demonstrate that an application is nonenabling if the publication provides evidence of what one skilled in the art would have known on or before the application's effective filing date.
  - (iii) The state of the art existing at the issue date of the patent is used to determine whether a particular disclosure in the patent is enabling.
- (A) (i), (ii) and (iii) are all true.
  - (B) (i) and (ii) are true; (iii) is false.

- (C) (i) is false; (ii) and (iii) are true.
- (D) (i) is true; (ii) and (iii) are false.
- (E) (i), (ii) and (iii) are all false.

17. Which of the following expressions, when found in a claim, comply with the provisions of the second paragraph of 35 U.S.C. § 112?

- (A) containing A, B, and optionally C . . . .
- (B) material such as rock, wool or asbestos . . . .
- (C) lighter hydrocarbons, such, for example, as the vapors or gas produced . . . .
- (D) normal operating conditions such as while in the container of a proportioner . . . .
- (E) such material as wood and the like . . . .

38. Which of the following is not a correct statement regarding the consideration of asserted therapeutic or pharmacological utility?

- (A) Evidence of pharmacological or other biological activity of a compound will be relevant to an asserted therapeutic use if there is reasonable correlation between the activity in question and the asserted utility.
- (B) An applicant can establish a correlation by relying on statistically relevant data documenting the activity of a compound or composition which is claimed.
- (C) The applicant does not have to prove that a correlation exists between a particular activity and an asserted therapeutic use of a compound as a matter of statistical certainty.
- (D) An applicant must provide evidence of success in treating humans where such a utility is disclosed.
- (E) An applicant need not provide evidence that an animal model for the human disease condition had been established prior to the filing date of the application.

39. Which one of the following statements regarding establishment of a *prima facie* case of obviousness is not correct?

- (A) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
- (B) There must be a reasonable expectation of success.
- (C) The prior art reference (or references when combined) must teach or would have suggested all the limitations in the claim.
- (D) The teaching or suggestion to make the claimed combination that is found in the applicant's disclosure may be used by the examiner.
- (E) The prior art references when combined, cannot render the prior art unsatisfactory for its intended purpose.

40. In which of the following situations may an affidavit or declaration under 37 CFR § 1.131 be properly used?

- (A) Where the reference publication date is more than one year before applicant's or patent owner's effective filing date.
- (B) Where the reference, a U.S. Patent, with a patent date less than one year prior to applicant's effective filing date, shows but does not claim the same patentable invention.
- (C) Where the subject matter relied upon is evidence under 35 U.S.C. § 102(f).
- (D) Where the reference is a prior U.S. patent to the same inventive entity claiming the same invention.
- (E) Where the applicant has clearly admitted on the record that the prior art invention was prior to his invention.

41. Claim 1 in a patent application is directed to a method for whitening teeth. Claims 1 through 5 read as follows:

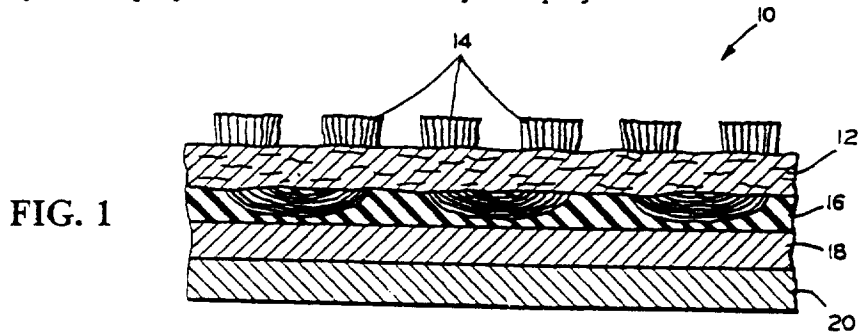
1. A method for whitening teeth comprising isolating the teeth to be treated; preparing a bleaching composition comprising an oxygen-radical generating agent; applying said composition to said isolated teeth; and exposing each of said isolated teeth to laser light from an argon laser for a selected time to accelerate whitening.
2. The method of Claim 1, wherein said bleaching composition further comprises a booster selected from the group consisting of ammonium persulfate and sodium persulfate, and a buffer selected from the group consisting of sodium carbonate and sodium bicarbonate.
3. The oxygen radical-generating agent of Claim 1, where said generator is selected from the group consisting of hydrogen peroxide and sodium carbonate peroxide.
4. The buffer agent according to Claim 2, wherein said buffering agent is any other buffering agent which maintains a pH of said composition between 7 and 10.
5. A method according to Claim 4, wherein said argon laser has a wavelength range in the visible spectrum between 410 and 522 nanometers.

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.

42. A patent application is under preparation to be filed in the PTO. The application discloses and describes a tufted carpet shown in the drawing below (Figure 1) having several components. The following independent claim has been drafted:

1. A tufted carpet (10) comprising:
  - a primary backing (12) having loops of yarn (14) forming a tufted structure projecting outwardly from said primary backing;
  - a layer of latex (16) affixed to the primary backing;
  - a layer of polyolefin (18) affixed to the layer of latex; and
  - a secondary backing (20) consisting of a woven synthetic polyolefin affixed to the layer of polyolefin.



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

- (A) 2. The tufted carpet according to Claim 1, wherein the primary backing is jute, cotton, or a synthetic fiber.
- (B) 2. The tufted carpet according to Claim 1, wherein the secondary backing is woven cotton, or a woven synthetic polyolefin.
- (C) 2. The tufted carpet according to Claim 1, wherein the loops of yarn are selected from the group consisting of polyester, polyamide, nylon, and polyolefin.
- (D) 2. The tufted carpet according to Claim 1, wherein the polyolefin layer is selected from the group consisting of polyethylene, and polypropylene.
- (E) All are proper dependent claims.

43. Patent practitioner Smith filed a patent application for 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. Which of the following claims properly sets forth the composition?

- (A) An adhesive composition comprising a filler admixed with a 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.
- (B) An adhesive composition comprising means to admix a filler with a 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.
- (C) An adhesive composition comprising a filler for admixture with a 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.
- (D) An adhesive composition having a filler adapted to be admixed with a 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.
- (E) An adhesive composition assembly having a paste-like consistency capable of being applied to a substrate submerged in water.

44. Summer discovered that by adhering cotton swabs on opposing ends of a cylindrical rod, he could use the device to clean hair and dust particles caught in screens at the rear end of a hair dryer by causing a swab to contact a surface of the screen and rotating the swab to collect the hair and dust. Summer provides patent practitioner Smith with reliable test data establishing this fact. Preliminary to preparing a patent application, Smith conducted a search of the prior art, and found that cotton swabs adhering to opposing ends of a cylindrical rod, and the method of preparing such devices were disclosed in patents issued more than one year ago. Smith also found patents published five or more years ago disclosing hair dryers having a screen at an end of the hair dryer to catch hair and dust, and prevent the same from reaching the heating element in the hair dryer. Notwithstanding, Summer wants to file a patent application on his invention. In the absence of issues of supporting disclosure, which of the following is the best claim for Summer's invention?

- (A) A method of preparing a cotton swab device, said device being characterized by being useful for removing hair and dust from hair dryers.



- (B) A cotton swab device consisting of a cylindrical rod having first and second opposing ends, a first cotton swab adhering to said first opposing end, and a second cotton swab adhering to said second opposing end.
- (C) A method of removing hair and dust particles from a screen in an end of a hair dryer comprising bringing a cotton swab of a cotton swab device into contact with a surface of a screen of a hair dryer, and rotating the swab to collect the hair and dust.
- (D) A process for using a cotton swab device to remove materials selected from the group consisting of hair and dust particles from an end of a hair dryer.
- (E) A hair dryer having a screen at an end of the hair dryer, and a cotton swab device for removing hair and dust from said screen.

45. Presented below are five separate portions of five different claims. Assuming that there are no issues of support or lack of antecedent basis, which portion does not contain a means-or-step-plus function which invokes the sixth paragraph of 35 U.S.C. § 112?

- (A) 1. In a pressure responsive instrument having a pressure responsive chamber including a wall portion movable in reply to change in fluid pressure thereon, the improvement comprising a plate means and a leaf spring; wing means on said plate means . . . .
- (B) 1. A process for recovering molybdenum values in usable form from ferruginous, molybdenum - bearing slags comprising . . . raising the pH of the resulting pulp to about 5.0 to precipitate dissolved molybdenum trihydroxide . . . .
- (C) 1. A boring device for deep boring an object rotating about an axis, comprising . . force generating means adapted to provide a force acting on the cutting head to cause radial displacement of said cutting head . . . .
- (D) 1. In an aircraft having a bladed rotor adapted under at least one translational flight condition to provide both lift and propulsive thrust, a jet driving device so constructed and located on the rotor as to drive the rotor . . . .
- (E) 1. An air filter assembly for filtering air laden with particulate matter, said assembly comprising . . . said portion having means, responsive to pressure increases in said chamber caused by said cleaning means, for moving particulate matter in a downward direction . . . .

46. On January 15, 1996, Winter filed a patent application disclosing and claiming a process for promoting growth of a ruminant by administering a pharmacologically acceptable salt of lysocellin to said ruminant. In the application, physiologically acceptable salts of lysocellin are identified as sodium lysocellin, zinc lysocellin, and manganese lysocellin. The claims in the application are as follows:

1. A process for promoting growth of a ruminant by administering to said ruminant a growth-promoting amount of a pharmaceutically acceptable salt of lysocellin selected from the group consisting of manganese lysocellin, sodium lysocellin and zinc lysocellin.
2. The process of Claim 1 wherein the pharmaceutically acceptable salt of lysocellin is manganese lysocellin.
3. The process of Claim 1 wherein the pharmaceutically acceptable salt of lysocellin is sodium lysocellin.
4. The process of Claim 1 wherein the pharmaceutically acceptable salt of lysocellin is zinc lysocellin.

Claims 1-4 in Winter's application have been twice rejected under 35 U.S.C. § 103 over a U.S. patent granted to Spring on April 15, 1997, on an application filed March 12, 1996; which, in turn is a continuation-in-part application of an application filed December 12, 1994, now abandoned. The second rejection is a final rejection. As filed on December 12, 1994, Spring's application disclosed and claimed a "process for promoting growth of ruminants by administering to ruminants a growth promoting amount of manganese lysocellin," as well as how to make and use the invention, and the best mode for carrying out the invention. As filed on March 12, 1996, Spring's CIP application disclosed and claimed a "process for promoting growth of ruminants by administering to ruminants a growth promoting amount of a member selected from the group consisting of manganese lysocellin, sodium lysocellin, and zinc lysocellin." The CIP application also discloses how to make and use the invention, and the best mode for carrying out the invention. Claim 1 in Spring's patent claims a "process for promoting growth of a ruminant by

administering to the ruminant a growth promoting amount of a lysocellin material selected from the group consisting of manganese lysocellin, sodium lysocellin, and zinc lysocellin." The rejection may be properly obviated by:

- (A) A timely appeal of the rejection of Claims 1-4 to the Board of Patent Appeals and Interferences, a timely filed brief stating that the claims stand or fall together, and arguing that Spring's parent application only discloses administering the manganese lysocellin, and Spring's patent does not present a claim confined to administering a manganese lysocellin, and timely payment of all appropriate fees.
- (B) A timely appeal of the rejection of Claims 1-4 to the Board of Patent Appeals and Interferences, a timely filed brief stating that the claims stand or fall together, and arguing that Spring's patent claims are unsupported by the disclosure in the parent application because the description of one species, the manganese lysocellin, in Spring's parent application does not amount to a written description of the class of materials or genus set forth in Spring's patent claims, and timely payment of all appropriate fees.
- (C) A timely filed reply arguing that Spring's patent claim is unsupported by the disclosure in the parent application because the description of one species, the manganese lysocellin, in Spring's parent application does not amount to a written description of the class of materials or genus set forth in Spring's patent claims.
- (D) A timely filed reply containing an amendment canceling "manganese lysocellin," in Claim 1, and arguing that Spring's patent claim does not describe the invention now claimed in Winter's application, and that there is nothing in Spring's parent application disclosing or motivating one of ordinary skill in the art to promote growth of ruminants with sodium lysocellin or zinc lysocellin.
- (E) A timely filed reply containing an amendment cancelling "manganese lysocellin," in Claim 1, and cancelling Claim 2, and arguing that there is nothing in Spring's parent application disclosing or motivating one of ordinary skill in the art to promote growth of ruminants with sodium lysocellin or zinc lysocellin.

Answer Questions 47 and 48 based upon the following information. You have drafted and filed a patent application which includes the following disclosure and drawings:

The invention comprises a blinking-light LED device 10, a pair of which are shown adhered to the outer surface of a sports shoe 11. LED device 10 is formed by a heart-shaped casing 12 molded of synthetic plastic material, such as polyethylene or polypropylene. The device may also be formed in a different shape such as a star or animal. The invention consists of an interior cavity having an LED 15 provided with leads 15A and 15B. Lead 15A has a right angle bend to define the fixed contact of a make and break switch mechanism 14 having a movable contact 16. Movable contact 16 is formed by a cantilevered flat metal spring having a weight 17 attached to its free end. The other end of the movable contact 16 is connected to the positive terminal of a 1.5V battery cell 18 whose negative terminal is connected to the positive terminal of an identical cell 19. The negative terminal of cell 19 is connected through a current limiting resistor 20 to lead 15B of the LED, thereby, completing the circuit. The weighted movable contact 16 of the make and break switch mechanism 14 is acceleration-sensitive, which means that when shoe 11 is worn by a jogger, the foot movement of the jogger gives rise to changes in velocity which are sensed by movable contact 16, causing the contact to flex momentarily, and engage fixed contact defined by lead 15A, closing the switch to provide power to LED 15. When LED 15 is activated, it emits a flash of light. A strobe effect is created because current flowing through resistor 20 causes a voltage drop developed across the resistor which abruptly inactivates the LED. Therefore, the LED is briefly activated to produce an intense flash of light, very much in the manner of a strobe flashtube.

FIG. 1

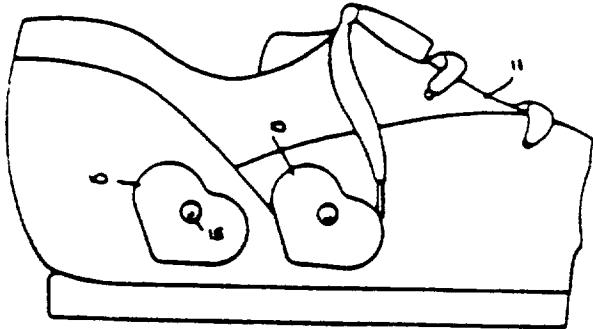
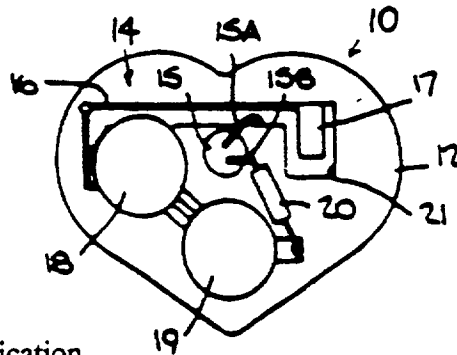


FIG. 2



The following independent claim is included in the application.

1. A blinking light LED device comprising:
  - (a) A casing (12) attachable to a shoe (11), an LED (15) mounted on the casing, said LED (15) having a first lead (15B) and a second lead (15A);
  - (b) A power source comprising batteries (18 & 19) connected in series, said power source having a positive terminal and a negative terminal, said negative terminal being connected to said first lead (15B);
  - (c) Said second lead defining a fixed contact;
  - (d) A make and break switch mechanism (14) having a movable contact defined by a

cantilevered flat spring (16) having a fixed end and a free end, said fixed end is connected to said positive terminal and said free end having a weight (17) attached thereto;

(e) Whereby movement of said movable contact causes said spring to flex and engage said fixed contact thereby causing said make and break switch mechanism to momentarily close and complete a circuit and briefly activate the LED (15).

Answer the following two questions based upon the foregoing disclosure and independent claim.

47. Which of the following claims would be a proper dependent claim?

- (A) 2. A blinking light LED device as set forth in Claim 1, further including a current-limiting resistor interposed between a lead and a terminal.
- (B) 2. A blinking light LED device according to Claim 1, wherein the invention further comprises a current-limiting resistor interposed between said first power source and said second power source.
- (C) 2. A jogger wearing a shoe as set forth in Claim 1, further including a current-limiting resistor interposed between a lead and a power source.
- (D) 2. A blinking light LED device as set forth in Claim 1, further comprising a current-limiting resistor interposed between said first lead and said negative terminal of the power source.
- (E) 2. A blinking LED shoe as set forth in Claim 1, the invention further consisting of a current-limiting resistor which causes a voltage drop to inactivate the LED.

48. You submitted the following dependent claim in the application:

- 3. A blinking light device as set forth in Claim 3, wherein the casing comprises molded synthetic plastic material.

The examiner issued a rejection under 35 U.S.C. § 112, second paragraph, citing the improper dependency of the claim. Which of the following proposed amendments will overcome the rejection?

- (A) 3. A blinking light device as set forth in Claims 1 or 2, wherein the casing comprises molded synthetic material.
- (B) 3. (Amended) A blinking light device as set forth in Claim [3] 1, wherein the casing comprises molded synthetic plastic material.
- (C) 3. (Amended) A blinking light device as set forth in [Claim] Claims 1 and 2, wherein the casing comprises molded synthetic plastic material.
- (D) 3. A blinking light device as set forth in the preceding claims [Claim 3], wherein the casing comprises molded synthetic plastic material such as polyethylene.
- (E) 3. (Amended) A blinking light device as set forth in Claim [3] 1, wherein the casing is made of synthetic plastic material.

49. A patent application is being prepared. The application discloses and describes a construction device shown in the drawing below (Figure 1) having several components. Certain "means" are not illustrated Figure 1, but are shown in other drawings not presented below or they are described elsewhere in the application. The following independent claim has been drafted:

1. A construction device comprising:
  - a frame (12);
  - a plate (20) having a front surface and a back surface, said plate being disposed in said frame;
  - a glass tube (18) supported by said back surface of said plate, and having a visually perceptible indicia and being filled with inert gas;
  - means for illuminating said glass tube; and
  - a reflective panel (22), for reflecting light transmitted from the glass tube, disposed in said frame at a spaced distance from said plate and glass tube.

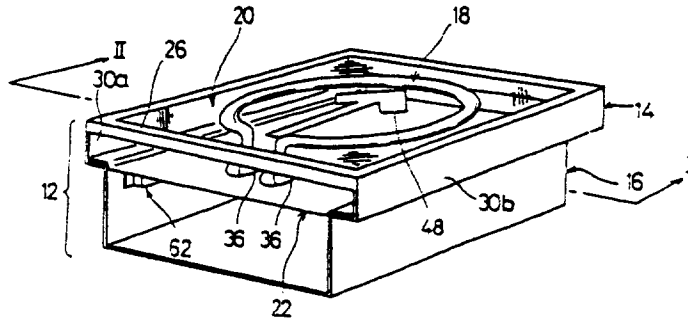


FIG. 1

In the absence of issues of supporting or enabling disclosure in the description portion of the specification, which of the following dependent claims lacks proper antecedent basis when the application is filed in the PTO?

- (A) 2. The construction device according to Claim 1, wherein said plate is made of a glass material.
- (B) 3. The construction device according to Claim 2, further comprising means to secure the glass tube to said back surface of said plate.
- (C) 4. The construction device according to Claim 1, wherein said means to secure the glass tube to said back surface of said plate is an optically transparent thermosetting resin.
- (D) 5. The construction device according to Claim 1, wherein a protection layer consisting of an optically transparent thermoplastic resin is disposed on the entirety of said back surface of said plate in such a manner that said protection layer covers at least a portion of said glass tube.
- (E) 6. The construction device according to Claim 1, wherein said inert gas is helium.

50. A patent application is filed with the following original Claim 1:

An automatic processor for processing a silver halid photographic light-sensitive material with a processing solution, the processor comprising:  
a processing solution tank containing a processing solution for processing the material;  
a circulating path for circulating the processing solution, and  
a supply means for supplying a solid composition to the processing tank or the path wherein the following expression is satisfied:

$$V <$$

where V represents an amount of the processing in the processing tank, and Vf represents the amount of processing solution in the path.

Which of the following is in accord with proper PTO amendment practice and procedure?

- (A) In Claim 1, line 1, delete "halid" and insert in its place --halide--.
- (B) In Claim 1, line 4, add --the circulating path connect the processing tank--.
- (C) In Claim 1, line 7, after "<" insert --Vf--.
- (D) In Claim 1, line 8, after "processing" insert --solution--.
- (E) All of the above.