

# WIPO



PCT/AAQ/VIII/12

ORIGINAL: English

DATE: August 26, 1977

## WORLD INTELLECTUAL PROPERTY ORGANIZATION GENEVA

### PATENT COOPERATION TREATY

#### INTERIM ADVISORY COMMITTEE FOR ADMINISTRATIVE QUESTIONS

Eighth Session

Geneva, October 10 to 18, 1977

#### DRAFT GUIDELINES FOR DRAWINGS UNDER THE PATENT COOPERATION TREATY (PCT)

Revised Version

prepared by the International Bureau

#### Background to the present document

1. The PCT Interim Advisory Committee for Administrative Questions (hereinafter referred to as "the Interim Committee") at its seventh session, held in Geneva from November 1 to November 8, 1976, had before it a document entitled "Guidelines on the Presentation and Execution of Drawings under the Patent Cooperation Treaty (PCT)" (document PCT/AAQ/VII/11). The Interim Committee established, at its said session, a Working Group on Guidelines for Publication and for Drawings (hereinafter referred to as "the Working Group") for the purpose of assisting in the establishment of Guidelines for Publication and Guidelines for Drawings and referred the said document to the Working Group (see the said report, document PCT/AAQ/VII/19, paragraphs 138 and 157).
2. At its session held in Geneva from February 21 to 25, 1977, the Working Group had before it the said document PCT/AAQ/VII/11, which contained draft Guidelines that were a modified version of "Guidelines on the Presentation and Execution of Drawings and Figurative Representations Accompanying a European Patent Application," observations on the said draft Guidelines from the Patent Office of the United Kingdom (document PCT/WG/GPD/I/4) and a final version of Guidelines for Drawings as adopted by the Interim Committee of the European Patent Organisation (EPO) (hereinafter referred to as the "EPO Guidelines") (document PCT/WG/GPD/I/5).
3. The Working Group, at its session referred to above, decided to base its work on document PCT/WG/GPD/I/5 in view of the fact that the draft Guidelines contained in document PCT/AAQ/VII/11 were based on an earlier draft of Guidelines for Drawings prepared for consideration in the framework of the Interim Committee of the EPO from which a significant amount of material had been deleted in the course of the elaboration of the EPO Guidelines.
4. The Working Group, having decided that the main body of the Guidelines for Drawings under the Patent Cooperation Treaty (hereinafter referred to as the "PCT Guidelines") should be elaborated with a similar objective to that of the EPO Guidelines, that is, having a primary purpose of serving PCT Authorities rather than applicants and draftsmen, undertook a brief review of the EPO Guidelines in order to assist the International Bureau in the preparation of a revised version of the PCT Guidelines on the basis of the EPO Guidelines. The Working Group decided, nevertheless, that material of an informative nature relating to the manner of

execution of drawings, as contained in document PCT/AAQ/VII/11, could be useful, since the framework of the PCT was broader than that of the regional system established under the European Patent Convention, and should therefore be retained in an Annex to the main body of the PCT Guidelines.

5. The Working Group furthermore accepted with gratitude an offer made on behalf of the United States Patent and Trademark Office to review the EPO Guidelines in detail and to provide to the International Bureau a copy of those Guidelines marked up to show the amendments and references necessary for PCT Guidelines.

#### Contents of the present document

6. The present document contains:

(i) the said revised version of the PCT Guidelines ("Guidelines for Drawings under the Patent Cooperation Treaty (PCT)");

(ii) a draft of the said Annex to the PCT Guidelines, containing material of an informative nature and including, in an Appendix of eight parts (Parts I to VIII), examples of drawings designed to show the various ways in which the specified Rules of the Regulations under the PCT may be applied, or, in some cases, in which errors may be avoided (for the latter, the identification of figures, i.e., their reference numbers, which give examples of errors is crossed through with two lines);

(iii) Annexes I and II to this document, containing comments received from the Japanese Patent Office and the State Committee for Inventions and Discoveries of the USSR Council of Ministers in relation to the EPO Guidelines;

(iv) Annex III to this document, containing observations received from the Patent Office of the United Kingdom on document PCT/AAQ/VII/11;

(v) Annex IV to this document, comprising a marked-up copy of the EPO Guidelines prepared by the United States Patent and Trademark Office.

#### Revised Version of the PCT Guidelines

7. The revised version of the PCT Guidelines is concerned with the essential requirements for drawings under the PCT and the Regulations thereunder. The said revised version of the PCT Guidelines has been prepared mainly on the basis of the marked-up copy of the final EPO Guidelines on Drawings contained in Annex IV to this document, taking into account, nevertheless, the comments made at the said session of the Working Group and the written comments submitted to the International Bureau by the members of the Working Group.

#### Annex to the PCT Guidelines ("Informative Material Relating to Drawings under the PCT")

8. This Annex will contain the informative material mentioned in paragraph 4 above. The International Bureau prepared the draft of the Annex bearing in mind that the essential information as to the requirements of the PCT in relation to drawings will be contained in the PCT Guidelines and not in the Annex and that some informative material was already included in the marked-up copy of the EPO Guidelines as contained in Annex IV. Since the inclusion of drawings in the Appendix to document PCT/AAQ/VII/11 represented a significant informative element of that document, the drawings contained in that Appendix have been retained in the Annex to the PCT Guidelines.

9. The Interim Committee is invited to consider the revised version of the PCT Guidelines and give its advice to the International Bureau so that the Guidelines for Drawings under the Patent Cooperation Treaty (PCT) can be finally established.

DRAFT GUIDELINES FOR DRAWINGS  
UNDER THE PATENT COOPERATION TREATY (PCT)

Table of Contents

	<u>Page</u>
Introductory Note . . . . .	5
GUIDELINES	
1. When drawings are required . . . . .	7
2. Graphic forms which are considered to be drawings . . . . .	7
3. Presentation of drawings . . . . .	7
4. Conditions regarding the paper used . . . . .	8
5. Fastening sheets of drawings . . . . .	8
6. Presentation of the sheets of drawings . . . . .	8
Usable surface area of the sheets of drawings . . . . .	8
Numbering of sheets and drawings . . . . .	8
7. General lay-out of drawings . . . . .	9
Placement of figures . . . . .	9
Numbering of figures . . . . .	9
Complete figure . . . . .	9
8. Expressions, etc., not to be used . . . . .	10
9. Execution of drawings . . . . .	10
Drawing of lines and strokes . . . . .	10
Shading . . . . .	10
Cross-sections . . . . .	10
Sectional diagrams . . . . .	10
Hatching . . . . .	11
Scale of drawings . . . . .	11
Numbers, letters and reference signs . . . . .	11
Reference lines . . . . .	11
Arrows . . . . .	11
Numbers and letters in the drawings . . . . .	11
Consistent use of reference signs as between the description, claims and drawings . . . . .	12
Consistent use of reference signs as between the figures of the drawings . . . . .	12
Variations in proportions . . . . .	12
10. Text matter on drawings . . . . .	12
11. Conventional symbols . . . . .	13
12. Amendments to drawings . . . . .	13

Table of Contents (Continued)

	<u>Page</u>
13. Graphic forms not considered to be drawings . . . . .	13
Chemical or mathematical formulae . . . . .	13
Tables (in the description) . . . . .	14
Tables (in the claims) . . . . .	14
14. Photographs and Photomicrographs (excluding photolithographs) . . . . .	14
ANNEX (Informative Material Relating to Drawings under the PCT)	
Introductory Note . . . . .	15
Informative Material . . . . .	16
APPENDIX Parts I to VIII--Examples of Drawings	

DRAFT GUIDELINES FOR DRAWINGS  
UNDER THE PATENT COOPERATION TREATY (PCT)

Introductory Note

1. These Guidelines are directed to the Regulations under the Patent Cooperation Treaty (PCT) relating to drawings (Rule 11). They reproduce, at least in part, for easy reference, the text of the Rules concerning drawings, together with comments, observations and explanations regarding interpretation. The provisions of the Regulations under the PCT relevant to a particular paragraph are cited in the left-hand margin opposite the paragraph concerned.

2. The Guidelines deal with the requirements for drawings that are a part of international applications and are intended to be used primarily by the PCT Authorities to determine the acceptability of the drawings submitted in international applications.

3. The Guidelines should provide a handy aid and reference material for those persons whose task it is to see that the drawings comply with the various physical requirements under the PCT and also for those persons who prepare such drawings-- applicants and their attorneys or agents and draftsmen.

4. It is to be noted that these Guidelines are meant to be recommendations for the purpose of achieving some degree of uniformity and are not mandatory requirements to the extent that they specify details beyond the scope of the Regulations under the PCT.

5. As explained in Section 13 of the Guidelines, figurative representations, i.e., chemical and mathematical formulae and tables, are not considered as drawings under the Regulations of the PCT. Nevertheless, to the extent that such figurative representations are produced and reproduced, by means similar to drawings, they are also dealt with in these Guidelines.

6. Notwithstanding the fact that photographs are not mentioned in the PCT or the Regulations thereunder, under certain conditions photographs may be necessary for the understanding of a claimed invention; therefore these Guidelines deal with them too.

7. Drawings are an international language; this is a particularly important factor when technical documents have to be translated into several languages. While a translation, however carefully done, may not reflect the author's true intentions, since every language has its own particular means of expression, a good drawing needs no alteration in order to be understood all over the world. The same is true of chemical and mathematical formulae, which give universally comprehensible expression to specific concepts.

8. The drawings, if any, in an international application are of prime importance. The international application is either published in English, French, German, Japanese or Russian, or, if filed in another language, in English translation. Anyone consulting the contents of a published international application who does not know the language in which the description, claims, and possibly the abstract are drawn up, thus has only the drawings from which to initially gain an idea of the content of the application. Hence the importance of Guidelines to ensure that drawings are clear and easily understood. This point must always be borne in mind by persons whose task it is to check drawings and by inventors, draftsmen, and the national patent Offices.

9. The one general principle which has prevailed in the formulation of all the drawing requirements under the PCT is that the drawings must be clear, legible and comprehensible. The ideal to be aimed at is a situation in which a look at the drawings and the description would show the reader not only the technical field covered by the invention, but also, and above all, the technical contribution it makes.

Rule 48.3(b)

10. Working on this principle, anything which might make a drawing unclear, or its meaning uncertain, must be corrected or altered, whereas features, or particular interpretations set forth in these Guidelines, which are designed to clarify drawings or the presentation of drawings may be permitted provided they are not detrimental to this principle.

11. It is also to be noted that the Regulations under the PCT require that, whenever drawings are reproduced by any means with a linear reduction in size to two-thirds, the drawings should enable all details to be distinguished without difficulty. The general principle enunciated in paragraph 9 above must be understood in the light of this requirement.

Guidelines for Drawings under the Patent Cooperation Treaty (PCT)

1. When drawings are required

1.1 The situations in which a drawing is required under the PCT are set forth in Article 7 and Rule 7.2 as follows:

Article 7

"(1) Subject to the provisions of paragraph (2) (ii), drawings shall be required when they are necessary for the understanding of the invention.

(2) Where, without being necessary for the understanding of the invention, the nature of the invention admits of illustration by drawings:

- (i) the applicant may include such drawings in the international application when filed,
- (ii) any designated Office may require that the applicant file such drawings with it within the prescribed time limit."

Rule 7.2

"The time limit referred to in Article 7(2) (ii) shall be reasonable under the circumstances of the case and shall, in no case, be shorter than 2 months from the date of the written invitation requiring the filing of drawings or additional drawings under the said provision."

2. Graphic forms which are considered to be drawings

Rule 7.1 2.1 Perspectives, exploded views, sections and cross-sections, and details on a different scale are all considered to be drawings within the meaning of the PCT. Drawings also cover "flow sheets and diagrams," such as functional diagrams and graphic representations of a given phenomenon which express the relationship between two or more magnitudes.

Rule 11.10 2.2 Chemical or mathematical formulae and tables may be included in the description, claims and abstract, in which case they are not subject to the same requirements as drawings. Such graphic forms are dealt with in further detail in Section 13. As explained in that Section, such graphic forms may nevertheless be submitted as drawings, in which case they are subject to the same requirements as drawings.

3. Presentation of drawings

Rule 11.13(j)  
Rule 11.10(a) 3.1 All figures of the drawings must be grouped together and arranged on a sheet or sheets without wasting space, preferably in an upright position, clearly separated from one another, and may in no event be included in the sheets containing the description, claims or abstract.

3.2 In accordance with Rule 11.2(a), the drawings "shall be so presented as to admit of direct reproduction by photography, electrostatic processes, photo offset and microfilming, in any number of copies."

3.3 As regards the figure, or figures in exceptional cases, to accompany the abstract, where an international application contains drawings, reference should be made to the "Guidelines for International Search to be Carried Out under the Patent Cooperation Treaty (PCT)," Chapter XI, Section 4. The figure(s) illustrating the abstract must be the figure(s) which better characterize(s) the claimed invention and must be chosen from the drawings accompanying the international application. The abstract may be illustrated by one or more figures only if the international application itself contains drawings. The figure(s) that will accompany the abstract at the time the international application is published may not be included in the abstract. At least one figure of the drawings should be suitable for use with the abstract.

#### 4. Conditions regarding the paper used

Rule 11.5 4.1 Drawings must be on sheets of A4 paper (29.7 cm x 21 cm) "which shall be flexible, strong, white, smooth, non-shiny and durable." "All sheets shall be Rule 11.3 free from creases and cracks; they shall not be folded." "Only one side of Rule 11.2(b) and (c) each sheet shall be used. "

Rule 11.12 4.2 "Each sheet shall be reasonably free from erasures and shall be free from alterations, overwritings and interlineations. Non-compliance with this Rule may be authorized, in exceptional cases, if the authenticity of the content is not in question and the requirements for good reproduction are not in jeopardy."

4.3 The aim of these provisions is to obtain a good quality reproduction of the original drawings which is as clear as possible. Erasures on an original sometimes reappear on a reproduction.

#### 5. Fastening sheets of drawings

Rule 11.4(b) 5.1 "All sheets of the international application shall be so connected that they can be easily turned when consulted, and easily separated and joined again ... "

5.2 Removable fastenings (for example, bendable prongs) are permitted if placed through holes which are placed in the left-hand margin in accordance with standard I.S.O. 838-1974 (E). Temporary fastenings (staples, paper clips and grips, etc.), which leave only slight marks in the margin, may also be used.

#### 6. Presentation of the sheets of drawings

6.1 The presentation of the sheets of drawings must conform to certain rules regarding the useable surface area and the numbering of the various sheets used (see also paragraphs 6.4 to 6.6 below and Section 207 of the Administrative Instructions).

##### Usable surface area of sheets

6.2 The usable surface area of sheets of drawings should be as follows:

Rule 11.6(c) "On sheets containing drawings, the surface usable shall not exceed 26.2 cm x 17.0 cm. The sheets shall not contain frames around the usable or used surface. The minimum margins shall be as follows: - top: 2.5 cm; - left side: 2.5 cm; - right side: 1.5 cm; - bottom: 1.0 cm."

6.3 Under Rule 11.6(e), the margins "must be completely blank" and, accordingly, no entries may be made in the margins. The drawings must be so set out that they do not overlap into the minimum margin defined in Rule 11.6(c).

##### Numbering of sheets and drawings

Rule 11.7(a) 6.4 "All the sheets contained in the international application shall be numbered Rule 11.7(b) in consecutive arabic numerals." "The numbers shall be placed at the top of the sheet, in the middle, but not in the margin" regardless of the positioning of the figures. The sheets of drawings must be numbered within the maximum usable surface area (i.e., 26.2 cm x 17.0 cm) as defined in Rule 11.6(c)). Instead of numbering the sheet in the exact middle at the top, in certain exceptional cases it may, however, be acceptable for the drawing to be numbered towards the right-hand side, if the drawing comes too close to the middle of the edge to provide sufficient usable surface. This numbering should be in numbers larger than those used as reference signs in the drawings to avoid any confusion with the latter.

6.5 As stated in paragraph 6.4 above, Rule 11.7(a) requires all sheets of the international application to be numbered consecutively. According to Article 3(2), an international application consists of all the following elements: a request, a description, one or more claims, one or more drawings (where required) and an abstract. Taking these two requirements together it might appear, therefore, that all the sheets making up the international application must be numbered consecutively. Section 207 of the Administrative Instructions, however, provides that the numbering of sheets should be effected



by the use of three separate series of numbering. The first series of numbers shall be applied to the request only, and shall commence with the first sheet of the request. The second series of numbers shall commence with the description and continue through the claims until the last sheet of the abstract and the third series shall be applied to sheets of the drawings commencing with the first sheet of the drawings.

6.6 It is therefore required that the sheets of drawings be consecutively paginated from 1 onwards, and it is suggested that the number of each sheet be shown by two arabic numerals placed either side of an oblique line, the first being the sheet number, and the second being the total number of sheets of drawings, with no other marking. For example, "2/5" would be used for the second sheet of drawings of a file containing 5 sheets and "1/1" would be used in the case of a single sheet. It should be noted, in particular, that the sheets of drawings should contain no entry such as "plate" or "sheet" which would entail having to translate such terms, thereby raising problems for sheets on which no other wording may appear.

#### 7. General lay-out of drawings

7.1 The various figures on the same sheet of drawings must be laid out according to certain requirements as to placement of figures and figure numbering. Figures divided into several parts must comply with particular requirements as explained below.

##### Placement of figures

Rule 11.2(d)  
Rule 11.13(j)

7.2 As far as possible, all figures of the drawings should be set out upright on the sheets (i.e., the short sides at the top and bottom). If a figure is broader than it is high, it may be set out so that the bottom of the figure lies parallel to and along the right-hand side of the sheet. In this case, if other figures are drawn on the same sheet, they should be set out in the same way, so that all the figures on a single sheet lie in the same position.

7.3 The drawing should contain as many figures as may be necessary to adequately show the claimed invention. The views may be plan, elevation, section, or perspective views; detail views of portions or elements, on a larger scale if necessary, may be used. Exploded views, with the separated parts of the same figure embraced by a bracket, to show the relationship or order of assembly of various parts are permissible. One figure should not be placed upon or within the outline of another figure. A spacing is recommended between each figure. They should not be separated by lines.

##### Numbering of figures

Rule 11.13(k)

7.4 "The different figures shall be numbered in arabic numerals consecutively and independently of the numbering of the sheets" and, if possible, in the order in which they appear. This numbering should be preceded by the abbreviation "FIG," whatever the language of the international application. Where a single figure is sufficient to illustrate the claimed invention, it should not be numbered and the abbreviation "FIG" should not appear. Rule 11.13(e) applies to numbers and letters identifying the figures, i.e., they must be simple and clear and may not be used in association with brackets, circles, or inverted commas. The figure numbers should also be larger than the numbers used for reference signs. An exception to Rule 11.13(k) quoted above may be permitted only as regards partial figures intended to form one complete figure, irrespective of whether they appear on one or several sheets. In this case the complete figure may be identified by the same number followed by a capital letter (e.g., FIGS, 7A, 7B).

Rule 11.13(i)

7.5 The different figures should preferably be set out, as far as possible, on each sheet in ascending numerical order from left to right and from top to bottom. If one of two figures illustrates on a larger scale a detail from the other, each figure should be numbered separately, and if possible, consecutively.

##### Complete figure

Rule 11.13(i)

7.6 "Where figures on two or more sheets form in effect a single complete figure, the figures on the several sheets shall be so arranged that the complete figure can be assembled without concealing any part of any of the figures appearing on the various sheets."

7.7 Partial figures drawn on separate sheets must always be capable of being linked edge to edge, that is to say, no partial figure may contain parts of another partial figure.

7.8 A very long figure may be divided into several parts placed one above the other on a single sheet. However, the relationship between the different parts must be clear and unambiguous. It is therefore recommended that a smaller scale figure be included showing the whole formed by the partial figures and indicating the positions of the parts shown.

8. Expressions, etc., not to be used

Rule 9.1(i),  
(ii) and (iv)

8.1 The provision that the international application should not contain expressions within the meaning of Rule 9.1 applies also to drawings, i.e., expressions or drawings contrary to morality, expressions or drawings contrary to public order ("ordre public") and any statement or other matter obviously irrelevant or unnecessary under the circumstances.

9. Execution of drawings

Drawing of lines and strokes:

9.1 Rule 11.13(a) sets certain standards for lines and strokes in drawings to permit satisfactory reproduction by the various means described in Rule 11.2(a) (see also paragraph 3.2 above).

Rule 11.13(f)

9.2 The drawings must be executed in durable, black lines and strokes. In all cases, the thickness of the lines and strokes must take into account the scale, nature, execution and perfect legibility of the drawing and of the reproductions. All lines must be drawn with the aid of drafting instruments except those which by their nature do not permit the use of such instruments, e.g., irregular diagrams and ornamental structures.

Shading

9.3 The use of shading in figures is allowed provided this assists in their understanding and is not so extensive as to impede legibility. Shading may, for instance, be used to indicate the shape of spherical, cylindrical, conical elements, etc. Flat parts may also be lightly shaded. Such shading is allowed in the case of parts shown in perspective but not for cross-sections. Only spaced lines may be used for shading, not fully blacked out areas. These lines must be thin, as few in number as possible and they must contrast with the rest of the drawings.

Cross-sections

9.4 In making and representing cross-sections, certain conditions must be observed with regard to the indication and identification of the figures concerned and how they are to be represented as more fully explained below.

Sectional diagrams

9.5 Where the figure is a cross-section on another figure, the latter should indicate the position of the section and may indicate the viewing direction by arrows at each end.

Rule 11.11(a)

9.6 Each sectional figure should be capable of being quickly identified, especially where several cross-sections are made on the same figure, e.g., by inscribing the words "Section on AB," or to avoid the use of lettering, by marking each end of the cross-section line on the diagram with a single Arabic or Roman numeral. This number will be the same as the Arabic or Roman numeral identifying the figure in the international application where the section is illustrated. A cross-section represents that part of an object which is situated on a cutting surface. In industrial drawings, the cross-section is that part of the object which is behind the cutting surface from the point of view of the person looking at it. Cutting surfaces are generally plane surfaces and if they are not they must be defined precisely. Cross-sections must always follow the cutting surface, whatever it may be.

Hatching

Rule 11.13(b) 9.7 A cross-section must be set out and drawn in the same manner as a normal view whose parts in cross-section are hatched with regularly spaced parallel oblique strokes, the space between strokes being chosen on the basis of the total area to be hatched.

Rule 11.13(b) 9.8 Hatching should not impede the clear reading of the reference signs and reference (lead) lines. Consequently, if it is not possible to place references outside the hatched area, the hatching may be broken off wherever reference signs are inserted. Certain types of hatching may be given a specific meaning. The hatching should be at a substantial angle to the surrounding axes or principal lines, preferably 45°. The various parts of a cross-section of the same item should be hatched in the same manner. The hatching of juxtaposed different elements must be angled in a different way. In the case of large areas, hatching can be confined to an edging drawn around the inside of the outline of the area to be hatched.

Scale of drawings

Rule 11.13(c) 9.9 The scale of the figure must be such that all the essential details can be clearly distinguished in a linear reduction in size to two-thirds.

Rule 11.13(d) 9.10 In exceptional cases, where required, the scale of the drawing may be graphically represented. Indications such as "actual size" or "scale 1/2" on the drawings or in the description, are not permitted.

Numbers, letters and reference signs

Rule 11.13(e) 9.11 Numbers, letters and reference signs and any other data given on the sheets of drawing, such as the numbering of figures, pages of the drawing, acceptable text matter, graduations on scales, etc., must be simple and clear, and not used in association with any brackets, inverted commas, circles or outlines whatsoever. Numbers, letters and reference signs should be laid out in the same direction as the diagram so as to avoid having to rotate the page.

Reference lines

Rule 11.13(a) 9.12 Reference (lead) lines are those lines between the reference signs and the details referred to. Such lines may be straight or curved and should be as short as possible. They must originate in the immediate proximity of the reference sign and extend to the feature indicated. Reference lines for certain reference signs may be omitted. Reference signs of this type, which are not connected to anything, will then indicate the surface or cross-section on which they are placed. In such cases the reference sign should be underlined to make it quite clear that the line has not been left out by mistake. Reference lines must be executed in the same way as lines in drawings.

Arrows

9.13 Arrows may be used at the end of the reference lines provided that their meaning is clear. They may indicate a number of points:

(a) a freestanding arrow indicates the entire section towards which it points;

(b) an arrow touching a line indicates the surface shown by the line looking along the direction of the arrow.

(c) arrows may also be used in appropriate cases to show the direction of movement.

Numbers and letters in the drawings

9.14 Under Rule 11.13(h), a minimum size of 0.32 cm is required for all numbers and letters used on the drawings so that their reduction in size to two-thirds remains easily legible.

Rule 11.13(h) 9.15 The Latin alphabet should normally be used for letters. The Greek alphabet is to be accepted, however, where it is customarily used, e.g., to indicate angles, wavelengths, etc.

Consistent use of reference signs as between the description, claims and drawings

Rule 11.13(1) 9.16 "Reference signs not mentioned in the description shall not appear in the drawings, and vice versa." Reference signs appearing in the drawings must be given in the description.

9.17 Features of a drawing should not be designated by a reference in cases where the feature itself has not been described. This situation may arise as a result of amendments to the description involving the deletion of pages or whole paragraphs. One solution would be to delete reference signs on the drawing which have been deleted in the description.

9.18 Where for any reason a figure is deleted, all reference signs relating solely to that figure appearing in the description and claims should also be deleted.

Rule 11.13(n) 9.19 In the case of international applications dealing with complex subjects and incorporating a large number of drawings, a separate sheet listing all reference signs may be attached to the end of the description as a part thereof. This list may take whatever form is appropriate and contain all the reference signs together with the designation of the features which they denote. This method could have the advantage of allowing an easier reference to the meaning of the various reference signs employed and understanding of the drawings.

Consistent use of reference signs as between the figures of the drawings

Rule 11.13(m) 9.20 "The same features, when denoted by reference signs, shall, throughout the international application, be denoted by the same signs."

9.21 There would be considerable confusion if a single feature were allocated different reference signs in the various figures of the drawing. However, where several variants or embodiments of a claimed invention are described, each with reference to a particular figure, and where each variant contains features whose function is the same or basically the same, the features may, if this is indicated in the description, be identified by reference numbers made up of the number of the figure to which it relates followed by the number of the feature, which is the same for all variants, so that a single number is formed, e.g., the common feature "15" would be indicated by "115" in Fig. 1 while the corresponding feature would be indicated by "215" in Fig. 2. This system has the advantage that an individual feature and the figure on which it is to be considered can be indicated at the same time. It can also make complex cases involving many pages of drawings easier to read. Instead of the common reference sign being prefixed by the number of a figure, it may, when the individual variants or embodiments are described with reference to particular groups of figures, be prefixed by the number of the particular variant or embodiment to which it relates; this system, should if used, be explained in the description.

Variations in proportions

Rule 11.13(g) 9.22 "Each element of each figure shall be in proper proportion to each of the other elements in the figure, except where the use of a different proportion is indispensable for the clarity of the figure."

9.23 As a preferred alternative to a difference in proportion within one figure for the purpose of achieving the necessary clarity, a supplementary figure should be added giving a larger scale illustration of the element of the initial figure. In such cases it is recommended that the enlarged element shown in the second figure be surrounded by a finely drawn or "dot-dash" circle in the first figure pinpointing its location without obscuring the figure.

10. Text matter on drawings

10.1 It should first be noted that Rule 11.13(e) and (h) also apply to text matter on the drawings.

Rule 11.11 10.2 "The drawings shall not contain text matter, except a single word or words when absolutely indispensable such as "water," "steam," "open," "closed," "section on AB" and in the case of electric circuits and block schematic or flow sheet diagrams, a few short catch words indispensable for understanding. Any words used shall be so placed that if translated, they may be pasted over without interfering with any lines of the drawings."

10.3 Where text matter is deemed indispensable for understanding the drawing, a minimum of words should be used, and a space free of all lines of drawings should be left around them to facilitate the insertion of any translation.

11. Conventional symbols

Rule 10.1(d)  
and (e)

11.1 Known devices may be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art provided no further detail is essential for understanding the subject-matter of the claimed invention. Other signs and symbols may be used on condition that they are not likely to be confused with existing conventional symbols, that they are readily identifiable, i.e. simple, and providing that they are clearly explained in the text of the description. Different types of hatching may also have different conventional meanings as regards the nature of a material seen in cross-section.

12. Amendments to drawings

12.1 Amendments to the drawings are permitted, as well as of the other documents. These amendments may be made at the request of the applicant. The amendments may concern either clerical errors or more substantial changes.

12.2 Amendments to drawings are, in general, subject to the same rules as apply under the PCT in respect of amendments to other documents of the international application.

12.3 The general rule governing the admissibility of amendments, which must be borne in mind, is that they must not extend the content of the application as filed, i.e., they must not have the effect of introducing new material.

12.4 If drawings which depart substantially from the physical requirements laid down in the Rules are filed in order to establish a particular date of filing or retain a priority date, such drawings will be permitted to be replaced so as to provide drawings complying with the Rules, provided that it is clear that no new material is thereby introduced into the international application. In view of this proviso, care should be taken that any "informal" drawings which are filed clearly show all the features necessary to illustrate the invention.

13. Graphic forms not considered to be drawings

Chemical or mathematical formulae

Rule 11.10(b)

Rule 11.9(b)

13.1 "The description, the claims and the abstract may contain chemical or mathematical formulae." Such formulae may be written by hand or drawn if necessary but it is recommended that appropriate drafting aids or materials such as stencils or transfers be used. For practical reasons formulae may be grouped together on one or more sheets in the description and paginated with it. It is recommended in such cases that each formula be designated by a reference sign and the description should contain references to such formulae whenever necessary.

13.2 Chemical or mathematical formulae may also be grouped together and be placed after the claims as drawings. In such a case, the chemical or mathematical formulae must be drawn to comply with the requirements for drawings and the sheets must be numbered as drawing sheets.

Rule 10.1(d)

13.3 The chemical or mathematical formulae must employ symbols in general use and must be drawn in such a way that they are completely unambiguous. Numerals, letters and signs which are not typed must be legible and identical in form in the various formulae, irrespective of the element of the international application in which they appear.

Rule 11.9(d)

Rule 11.13(h)

13.4 Chemical or mathematical formulae appearing in the text of the international application must have symbols the capital letters of which are at least 0.21 cm high. Where they appear on sheets of drawings, these symbols must be at least 0.32 cm high.

13.5 All mathematical symbols used in a formula which appear in a description or on sheets of drawings should be explained in the description, unless their significance is clear from the context. In any case, the mathematical symbols used may be collated in a list.

Tables (in the description)

- Rule 11.10(c) 13.6 For the sake of convenience, the tables may also be grouped together in one or more sheets of the description and paginated with it.
- 13.7 If two or more tables are necessary, each should be identified by an Arabic or Roman number, independently of the pagination of the description or drawings or of the figure numbering, or by a capital letter, or by a title indicating its contents, or by some other means.
- 13.8 Each line and column in a table should begin with an entry explaining what it represents and, if necessary, the units used.
- 13.9 It should be remembered that the characters must satisfy the requirements of Rule 11.9 and Rule 11.6(a) and (b), regarding the maximum usable surface areas of sheets and that these requirements apply to tables as well.

Tables (in the claims)

- Rule 11.10(c) 13.10 The claims may include tables if this is desirable in view of the subject-matter involved. In this case, the tables must be included in the text of the relevant claim; they may not be annexed to the claims nor may reference be made to tables contained in the description. Rule 6.2(a) stipulates that the claims may refer to the description or drawings in the international application only where this is absolutely necessary. The mere desire to eliminate the need to prepare further copies does not constitute absolute necessity.

14. Photographs and Photomicrographs (excluding photolithographs)

- 14.1 The PCT makes no provision for photographs or photomicrographs. Nevertheless, there are cases where a photograph is necessary, as it is sometimes impossible to draw what it shows, e.g., crystalline structures, metallurgical microstructures, textile fabrics, and grain structures. In such cases, one or more photographs may be necessary.
- 14.2 Photographs or photomicrographs may only be submitted where the claimed invention cannot be clearly understood by using regular drawings.
- 14.3 Such photographs, to be acceptable, must be made on photographic paper having the following characteristics which are generally accepted in the photographic trade: double weight paper with a surface described as smooth, tint, white.
- 14.4 In any event, photographs must be submitted on sheets of A4 size (29.7 cm x 21 cm) with the minimum margins laid down in Rule 11.6(c).

[Annex to the Guidelines follows]

INFORMATIVE MATERIAL RELATING TO DRAWINGS  
UNDER THE PCT

Introductory Note

1. This Annex contains material of an informative nature relating to drawings under the PCT which could be useful to draftsmen, inventors, applicants and the general public. The subject matter of each of the numbered Sections of this Annex has been arranged to coincide with the Sections of the Guidelines having the same numbers (there is no such correspondence between the subject matter of the paragraphs of this Annex and the paragraphs of the Guidelines having the same numbers); such subject matter has been included only to the extent that it provides information supplementing that contained in the Guidelines. In some cases, in order to preserve the correspondence between the sections of this Annex and those of the Guidelines, the sections of this Annex simply indicate that no information, in addition to that contained in the Guidelines, is thought necessary.
2. It is to be noted that the Guidelines themselves provide the essential information as to the requirements of the PCT in relation to drawings.
3. The Appendix to this Annex consists of eight parts (Parts I to VIII), containing examples of drawings which show the various ways in which the requirements of the PCT may be applied or, in some cases, in which errors may be avoided. In the last-mentioned case, the reference numbers of examples containing errors are crossed through with two lines.

ANNEX TO THE GUIDELINES

Informative Material Relating to Drawings under the PCT

1. When drawings are required

1.1 No further information, in addition to that contained in the Guidelines, is thought necessary.

2. Graphic forms which are considered to be drawings

2.1 Figures 4 and 6 (Appendix, Parts I and II), give examples of a flow sheet (a block diagram), and Figure 5 (Appendix, Part II), gives an example of a functional diagram (mixed block diagram); they are all drawings as mentioned in paragraph 2.1 of the Guidelines. The same is true of the diagram in Figure 8, Appendix, Part V.

2.2 When a process can be represented by drawings proper rather than a simple diagram (e.g., in Figures 1, 2 and 3, Appendix, Part I), it is preferable to do so. This makes the process more readily comprehensible and at the same time solves the problem of translating the text on the diagrams.

3. Presentation of Drawings

3.1 No further information, in addition to that contained in the Guidelines, is thought necessary.

4. Condition regarding the paper used

4.1 No further information, in addition to that contained in the Guidelines, is thought necessary.

5. Fastening sheets of drawings

5.1 No further information, in addition to that contained in the Guidelines, is thought necessary.

6. Presentation of the sheets of drawings

Useable surface area of sheets

6.1 The Appendix, Part I, illustrates the maximum useable surface area for drawings mentioned in paragraph 6.2 of the Guidelines. The illustration of the cover frame is only to delineate the surface area and should not appear on sheets of drawings submitted in international applications.

Numbering of sheets and drawings

6.2 The pagination of the sheets of drawings contained in the Appendix (Parts I to VIII) provides an example of the numbering of sheets of drawings in accordance with paragraph 6.6 of the Guidelines.

7. General layout of drawings

Placement of figures

7.1 Figures 13 to 16 in the Appendix, Part VI, illustrate drawings presented with insufficient space in between the figures, contrary to the recommendation contained in paragraph 7.3 of the Guidelines, and resulting in confusion between the reference signs of adjacent figures.

7.2 In the case of inventions concerning improvements to details of existing devices and machines, a general figure may be desirable to indicate where on the device or machine the improvement is situated, in order to ensure that the drawings are readily understood. If, for example, the invention relates to the fixing of an elastic diaphragm in a diaphragm pump, a figure--generally the first--may represent the entire pump, as improved by the invention, the details of which will



ANNEX TO THE GUIDELINES

then be given in the other figures. On the other hand, it would be unnecessary to represent the entire machine comprising this diaphragm, e.g., the automobile in which the diaphragm pump circulates the fuel.

7.3 In most cases, it will be unnecessary to represent an object by means of its 6 orthogonal views. It will be sufficient to choose the views which are the most representative and contain the minimum of hidden parts, so that the object is completely and unambiguously defined by means of the smallest possible number of views. To this end, it is sometimes sufficient to replace the various views of an object by a single perspective view. The simplest view compatible with the desired result should be chosen.

Numbering\_of\_figures

7.4 Figure 20 in the Appendix, Part VIII, illustrates the numbering of a complete figure divided into parts. This involves giving a single number to the complete figure, which is also given to the parts thereof by means of a bracket embracing the parts. It is clear that the separate parts in fact constitute one and the same complete figure so long as those parts of the complete figure appear on a single sheet.

Complete\_figure

7.5 Figures 7A and 7B in the Appendix, Parts III and IV, illustrate partial figures on several sheets forming, in effect, a single complete figure as mentioned in paragraph 7.6 of the Guidelines. Although it is possible to assemble these partial figures without concealing any of their parts, the relationship between the figures themselves is not clear. Figure 20 in the Appendix, Part VIII, on the other hand, is divided into two parts intended to be assembled edge to edge according to the plane taken along the lines A-A. The relationship between the two figures is thus rendered much clearer and does not lead to confusion since there is a clear division between the two figures.

8. Expressions, etc., not to be used

8.1 There are three categories of expressions which should not be contained in the drawings of an international application. These categories are referred to in paragraph 8.1 of the Guidelines and are specified in Rule 9.1. Examples of the kind of matter coming within the first and second categories--contrary to public order ("ordre public") or morality--are: incitement to riot or to acts of disorder; incitement to criminal acts; racial, religious or similar discriminatory propaganda; and grossly obscene matter. The purpose of Rule 9 is to prohibit the kind of matter likely to induce riot or public disorder, or lead to criminal or other generally offensive behaviour. The third category is irrelevant matter. It should be noted, however, that such matter is specifically prohibited under the Rule only if it is "obviously irrelevant or unnecessary," e.g., if it has no bearing on the subject matter of the invention or its background of relevant prior art.

9. Execution of drawings

Drawing\_of\_lines\_and\_strokes

9.1 Figure 10 in the Appendix, Part V, provides an example of strokes of insufficient density contrary to paragraphs 9.1 and 9.2 of the Guidelines. Figure 9 in the Appendix, Part V, on the other hand, complies with the requirement of density.

9.2 As indicated in paragraph 9.2 of the Guidelines, all lines must ordinarily be drawn with the aid of drafting instruments, except those which by their nature do not permit the use of such instruments, e.g., irregular diagrams and structures as illustrated by Figure 8 in the Appendix, Part V. Figure 11 in the Appendix, Part V, shows a drawing done free-hand without instruments which would not be acceptable.

9.3 Although Rule 11.13(a) requires the use of uniformly thick lines and strokes, the same figure may be drawn in strokes of different thicknesses and the thickness of a stroke or line may even be different at various points. Figure 9 of the Appendix, Part V, provides a good illustration of this.

ANNEX TO THE GUIDELINES

9.4 Lines and strokes of different thicknesses may be used in the same drawing where different thicknesses have a different meaning. One can, for instance, visualize the use of:

- a continuous thick line for edging and outlining views and cross-sections
- a continuous thin line for reference lines, hatching, outlining parts of adjoining elements, fictitious lines of intersection of surfaces connected by curved or rounded edges
- a continuous thin line drawn freehand for delimiting views, part sections or interrupted views
- a thin broken line made up of short dashes for hidden edges and contours
- a "dot-dash" thin line for axes and planes of symmetry, extreme positions of movable elements, in front of a cross-section
- a thin line terminating in two thick lines for outlines of cross-sections.

Shading

9.5 Figures 9 and 12 in the Appendix, Parts V and VI, show the use of spaced lines for shading as mentioned in paragraph 9.3 of the Guidelines.

Sectional diagrams

9.6 A cross-section should be marked according to a system enabling it to be quickly identified, especially in cases where several cross-sections are made on the same figure. According to the methods explained in paragraph 9.6 of the Guidelines, the cross-section may be designated by reference to the number of the figure, e.g., Figure 4 is a cross-section taken along the line 4-4 or IV-IV. This solution obviates the need for text on the drawings.

Hatching

9.7 The general considerations relating to hatching are set out in paragraphs 9.7 and 9.8 of the Guidelines. Hatching may have different conventional meanings as regards the nature of a material seen in cross-section. Figures 13 to 16 of the Appendix, Part VI, illustrate a cross-section of a synthetic plastic material.

Scale of drawings

Rule 11.13(c) 9.8 The scale to which a drawing is made ought to be large enough to show the mechanism without crowding when the drawing is linear reduced in size to two-thirds in reproduction, in accordance with paragraph 9.9 of the Guidelines. Views of portions of the mechanism on a larger scale should be used when necessary to show details clearly; two or more sheets should be used if one does not give sufficient room to accomplish this end, but the number of sheets should not be more than is necessary. If Figure 7B in the Appendix, Part IV, were reduced to two-thirds, it would no longer be possible to make out the smallest details and the drawing would be barely legible.

9.9 The graphic representation of the scale of drawings, in the exceptional cases where the applicant has deemed its inclusion useful, as explained in paragraph 9.9 of the Guidelines, should be such that it is still comprehensible when the drawing is reproduced in reduced format. A graphic representation of scale may be given in a conventional manner, e.g., by giving the dimensions on the figure itself. Figure 12 in the Appendix, Part VI, illustrates this solution. It should be noted that workshop drawings are generally not suited for international applications as they include measurements, processing instructions, etc., which are unnecessary for disclosure of the claimed invention.

### Numbers, letters and reference signs

9.10 It is desirable that numbers, letters and reference signs mentioned in paragraph 9.11 of the Guidelines should not be so placed in the closed and complex parts of the drawings as to interfere with a thorough comprehension of the same, and therefore should rarely cross or mingle with the lines. As a general rule, numbers, letters and reference signs should be placed as closely as possible to the part in question.

### Reference lines

9.11 Figure 17 in the Appendix, Part VII shows an example of straight reference lines while Figure 9 in the Appendix, Part V, illustrates curved reference lines in accordance with paragraph 9.12 of the Guidelines. The numbers and reference signs are normally connected by reference lines (executed in the same way as lines in the drawings) with the parts to which they refer. These lines may be broken if the part is hidden and itself drawn on a dotted line, and should be as short as possible.

9.12 Reference lines for certain reference signs may be omitted as mentioned in paragraph 9.12 of the Guidelines. Reference signs of this type, which are not connected to anything, will then indicate the surface or cross-section on which they are placed. In such cases, the reference sign may be underlined to make it quite clear that the line has not been left out by mistake. Reference signs 21, 26 or 28 of Figure 20 in the Appendix, Part VIII, illustrate this solution.

### Arrows

9.13 As regards the use of arrows at the end of reference lines mentioned in paragraph 9.13 of the Guidelines, reference 10, Figure 1 in the Appendix, Part I, illustrates a free-standing arrow for the entire section toward which it points whereas reference 36, Figure 9 in the Appendix, Part V, illustrates an arrow touching a line of the surface shown by the arrow. Figure 19 in the Appendix, Part VII, illustrates curved arrows which indicate angle dimensions.

### Numbers and letters in the drawings

9.14 Figure 7B in the Appendix, Part IV, illustrates reference numbers which are too small, contrary to the requirements mentioned in paragraph 9.14 of the Guidelines, while those in Figures 1 to 3 in the Appendix, Part I, are of the correct size. The angles shown in Figure 19 in the Appendix, Part VII, illustrate an appropriate use of the Greek alphabet instead of the Latin alphabet.

### Consistent use of reference signs as between description, claims and drawings

9.15 No further information, in addition to that contained in the Guidelines, is thought necessary.

### Consistent use of reference signs as between the figures of the drawings

9.16 Figures 1 to 3 in the Appendix, Part I, give examples of the same parts of the invention appearing in more than one view of the drawing which are designated by different reference signs contrary to the requirement contained in paragraph 9.20 of the Guidelines.

### Variation in proportion

9.17 Figure 18 in the Appendix, Part VII, illustrates a variation in proportion on a larger scale of part of Figure 17 indispensable for clarity of the figure in accordance with the requirements contained in paragraph 9.22 of the Guidelines. Such enlarged detail shown in Figure 17 has been indicated by a "dot-dash" circle in Figure 17 pinpointing the location of the enlarged view as explained in paragraph 9.23 of the Guidelines.

10. Text matter on drawings

10.1 The Figures mentioned below illustrate the application of Rule 11.11 as explained in paragraph 10.2 of the Guidelines. Figure 4 in the Appendix, Part I, for example, is correctly laid out: the diagram is immediately understandable but it is not certain that the translation of all the terms may be entered. The layout of Figure 5 in the Appendix, Part II, is straightforward and no translation is required, but reference to the description is necessary if it is to be comprehended. Figure 6 in the Appendix, Part II, contains a flow sheet with an excessive proportion of text which it may not be possible to replace by translations. The text appearing in Figures 7A and 7B in the Appendix, Parts III and IV, is simple and could be easily replaced by translations, but it is not absolutely indispensable as the diagrams may be comprehended simply with the aid of the description.

11. Conventional symbols

11.1 No further information, in addition to that contained in the Guidelines, is thought necessary.

12. Amendment to drawings

12.1 No further information, in addition to that contained in the Guidelines, is thought necessary.

13. Graphic forms considered not to be drawings.

13.1 No information, in addition to that contained in the Guidelines, is thought necessary.

14. Photographs and photomicrographs (excluding photolithographs)

14.1 No information, in addition to that contained in the Guidelines, is thought necessary.

[Appendix follows]

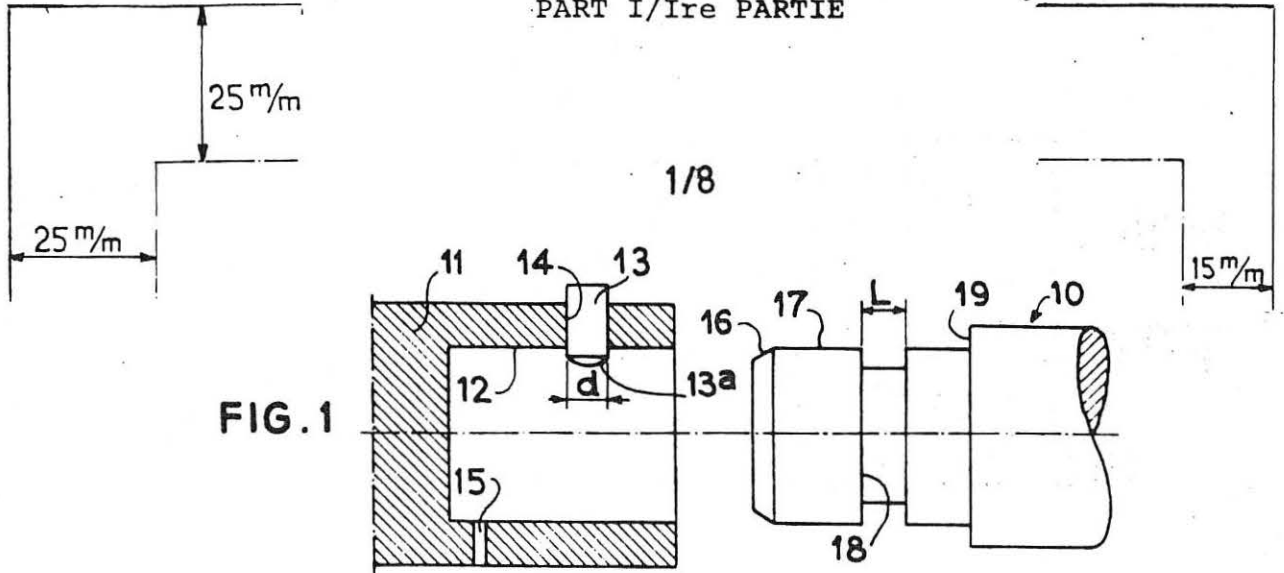
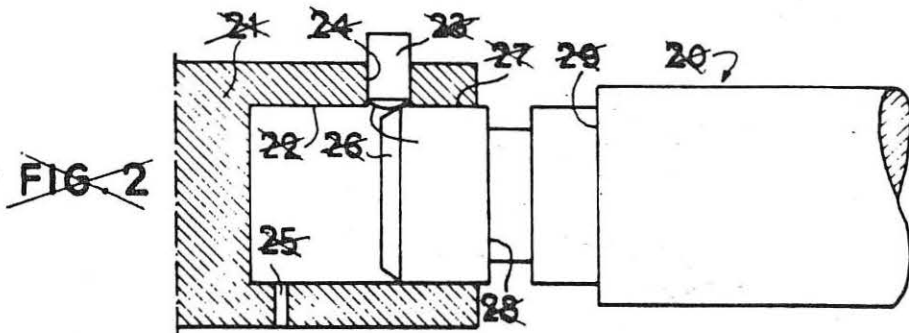
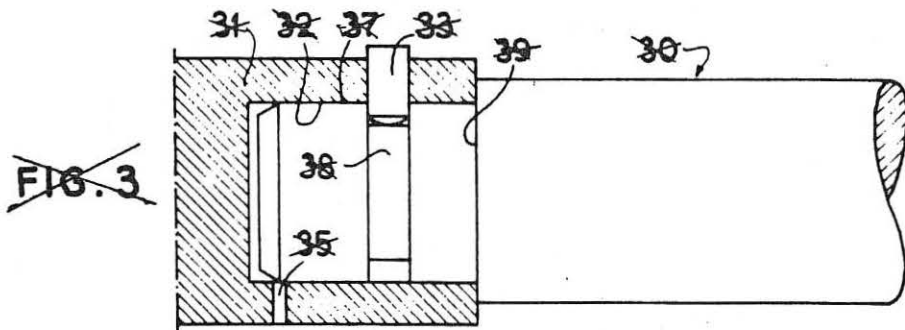


FIG. 1



~~FIG. 2~~



~~FIG. 3~~

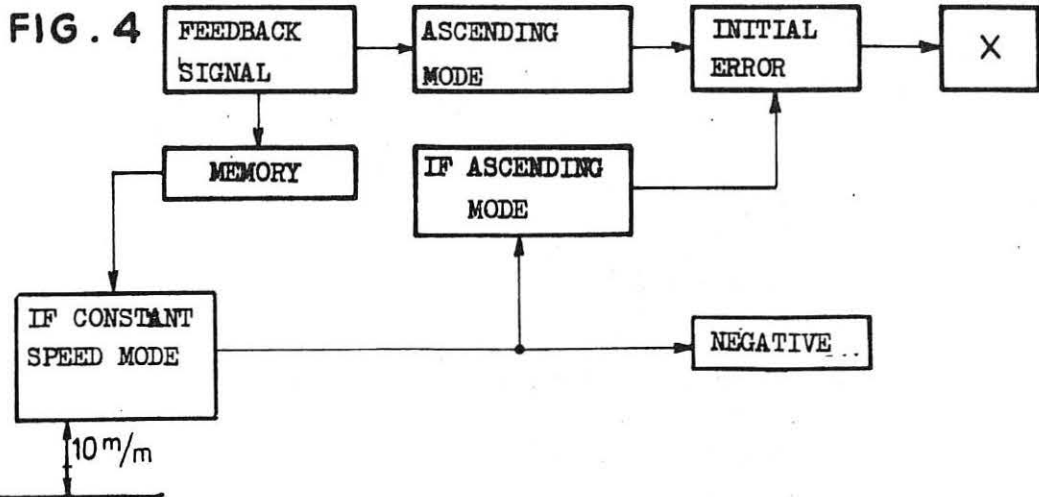
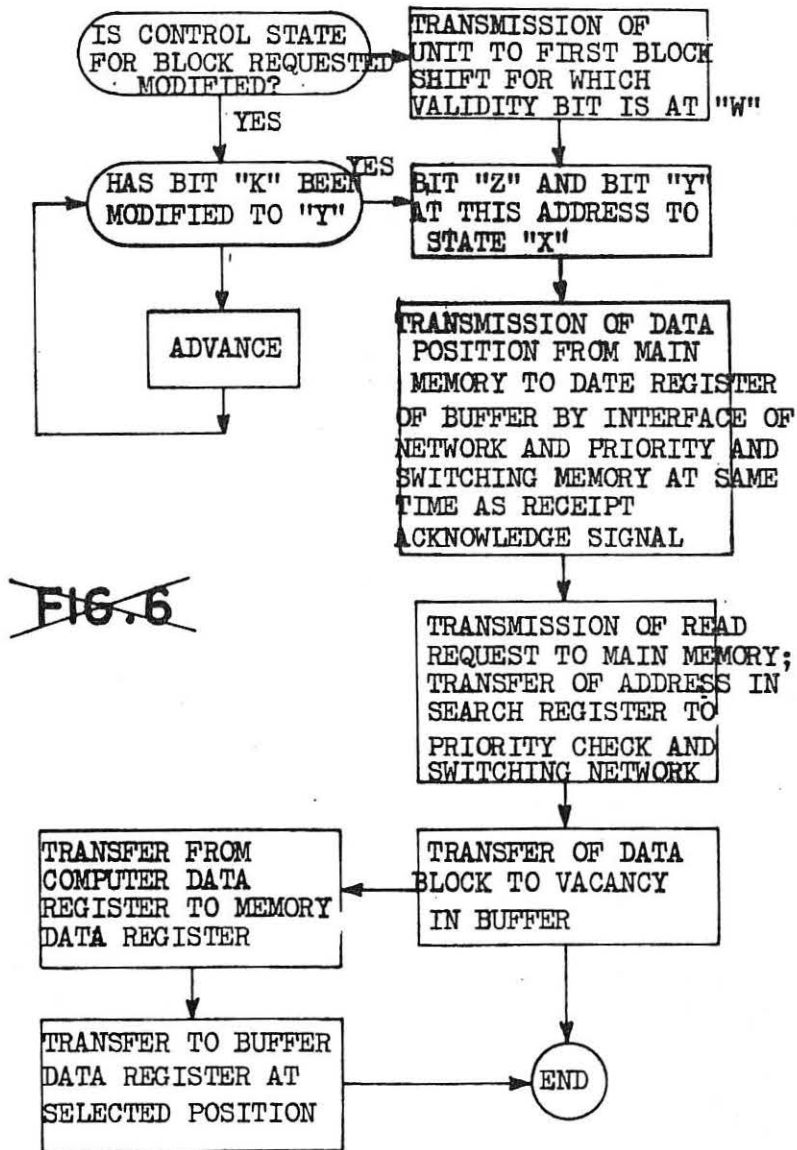
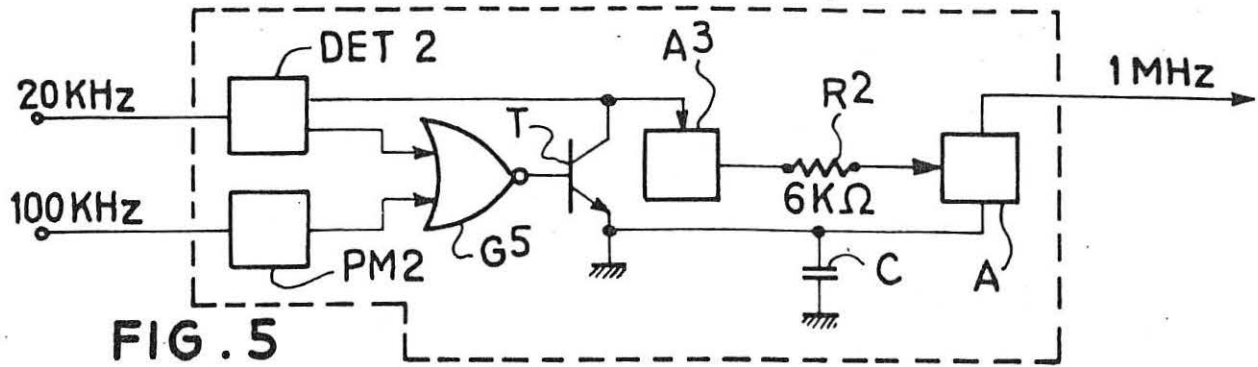
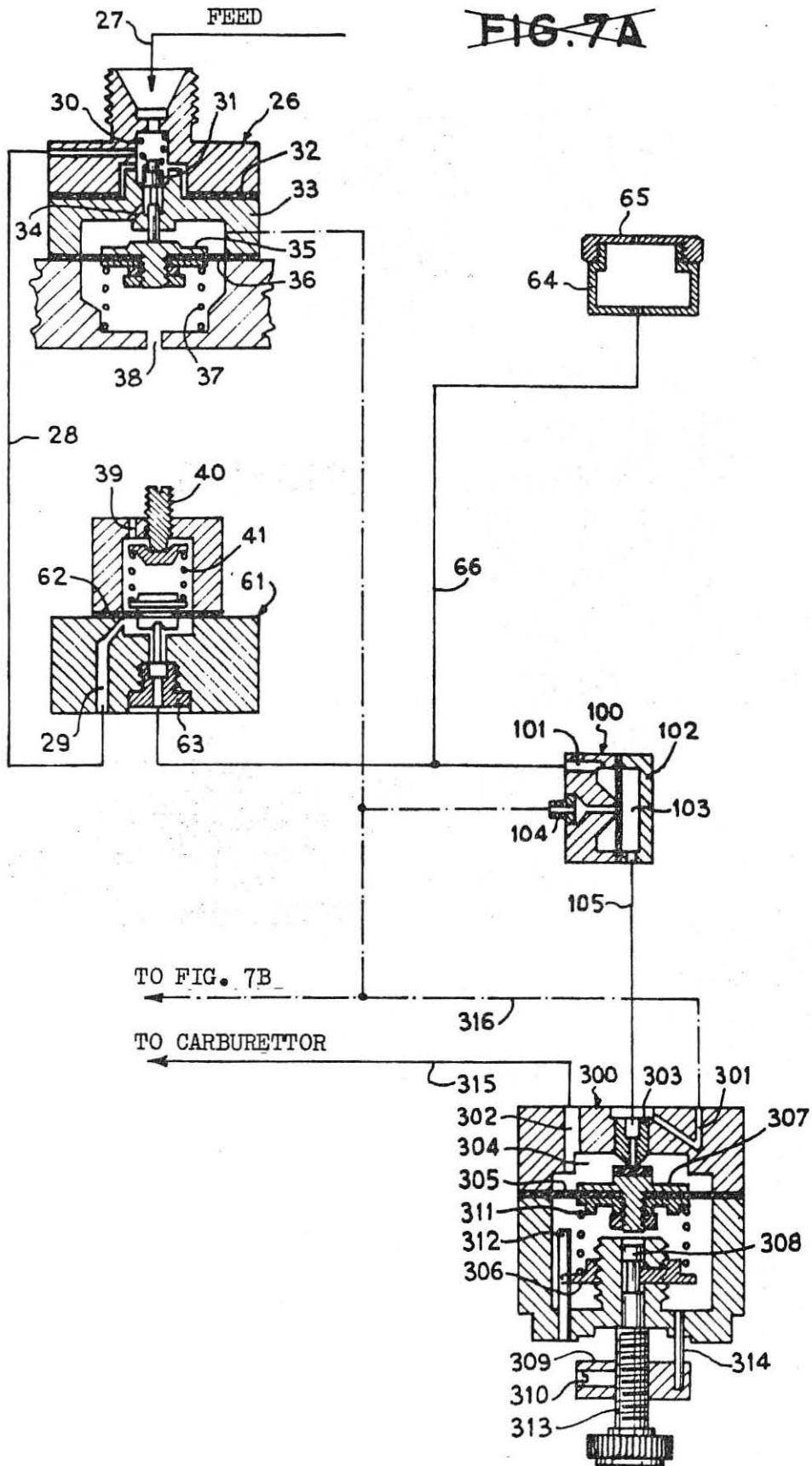


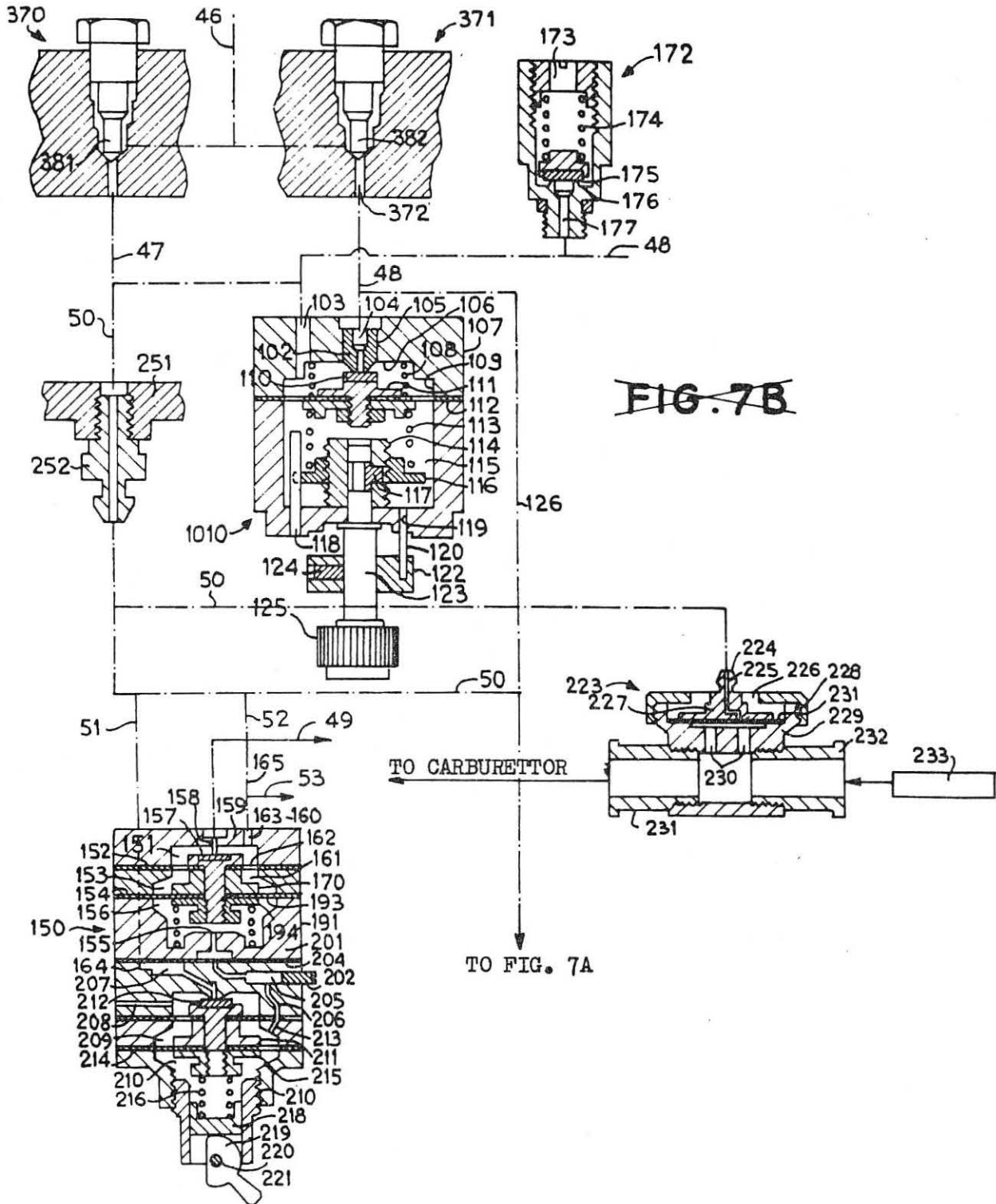
FIG. 4

2/8



~~FIG. 7A~~







5/8

FIG. 9

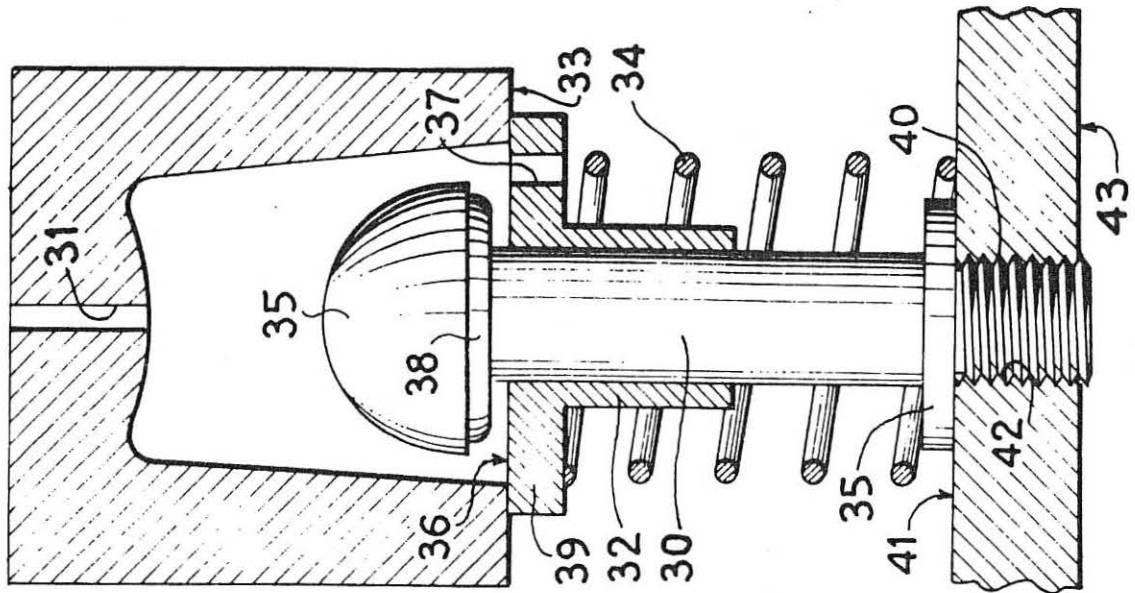


FIG. 8

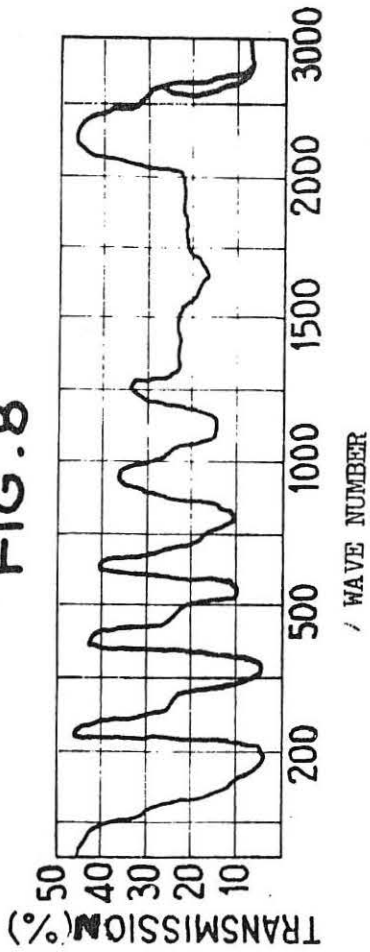


FIG. 11

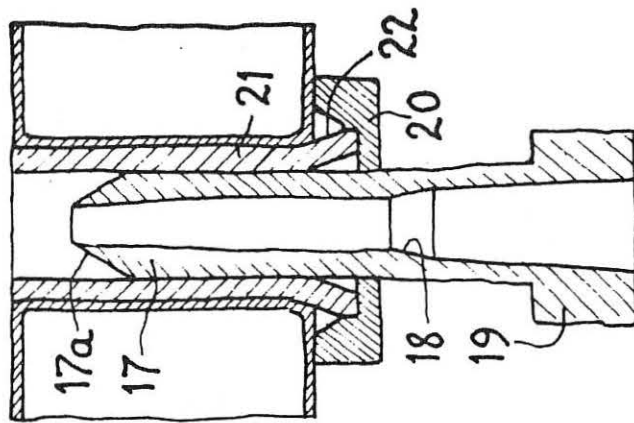
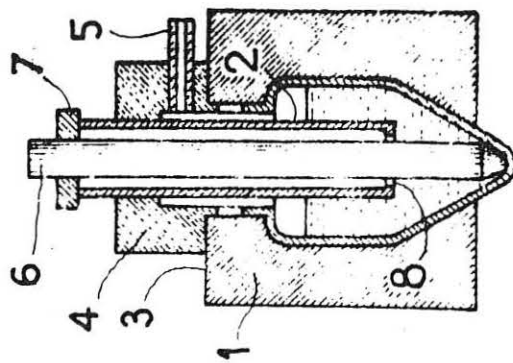
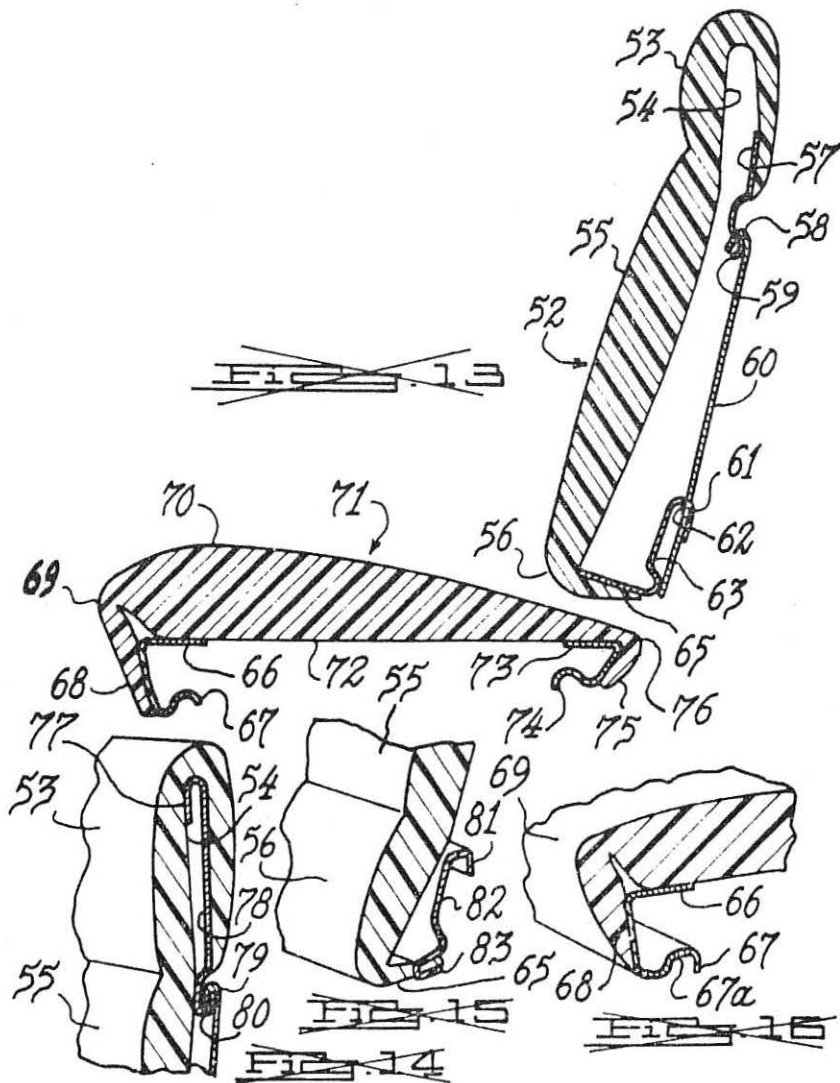
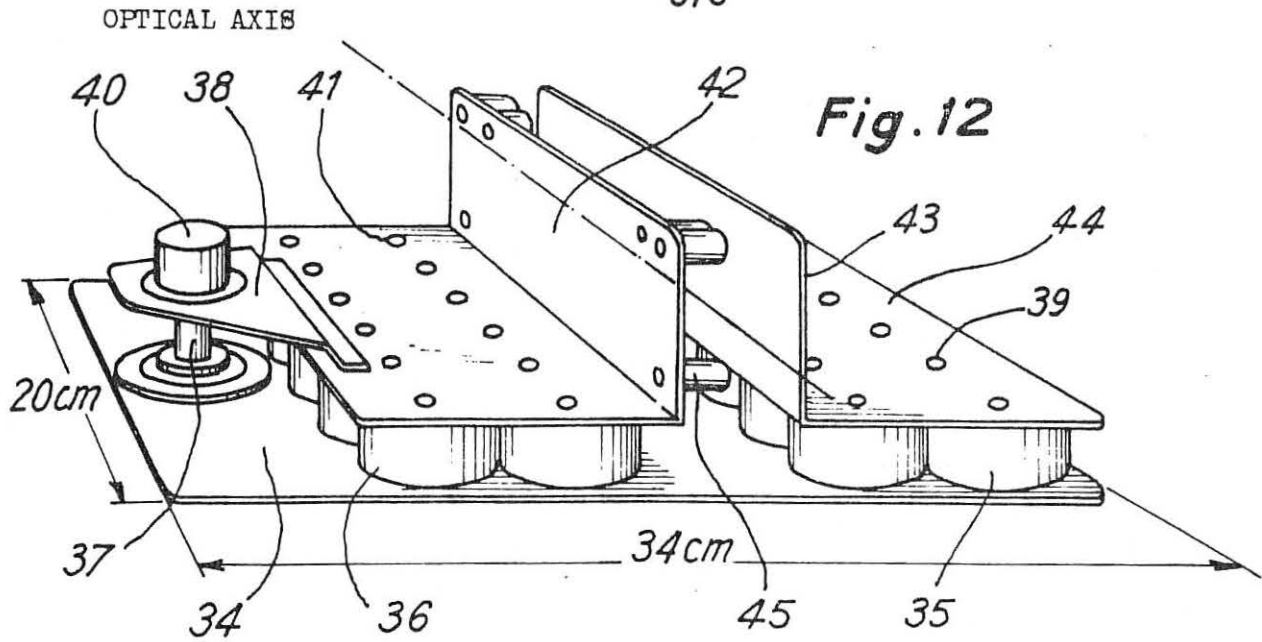


FIG. 10



6/8



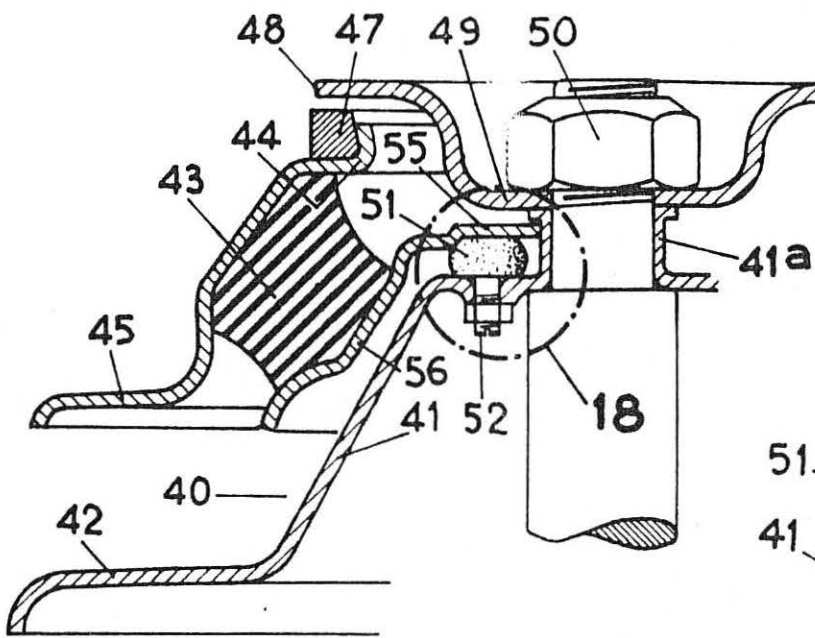


FIG. 17

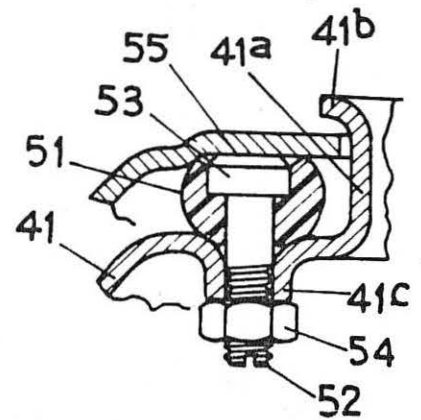
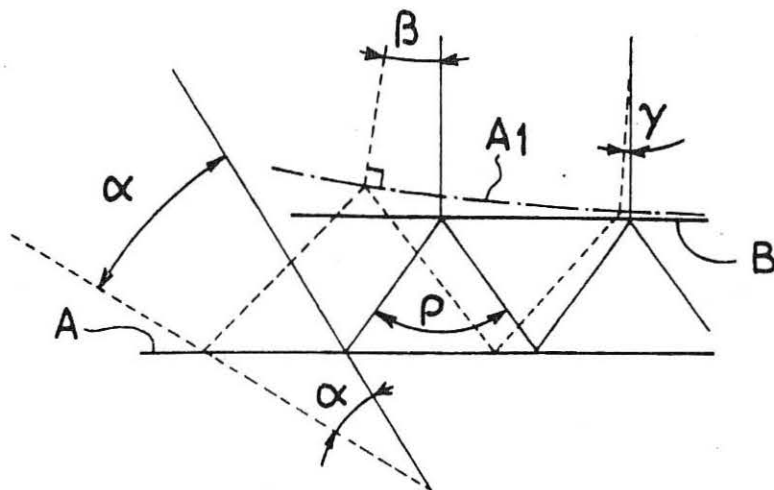
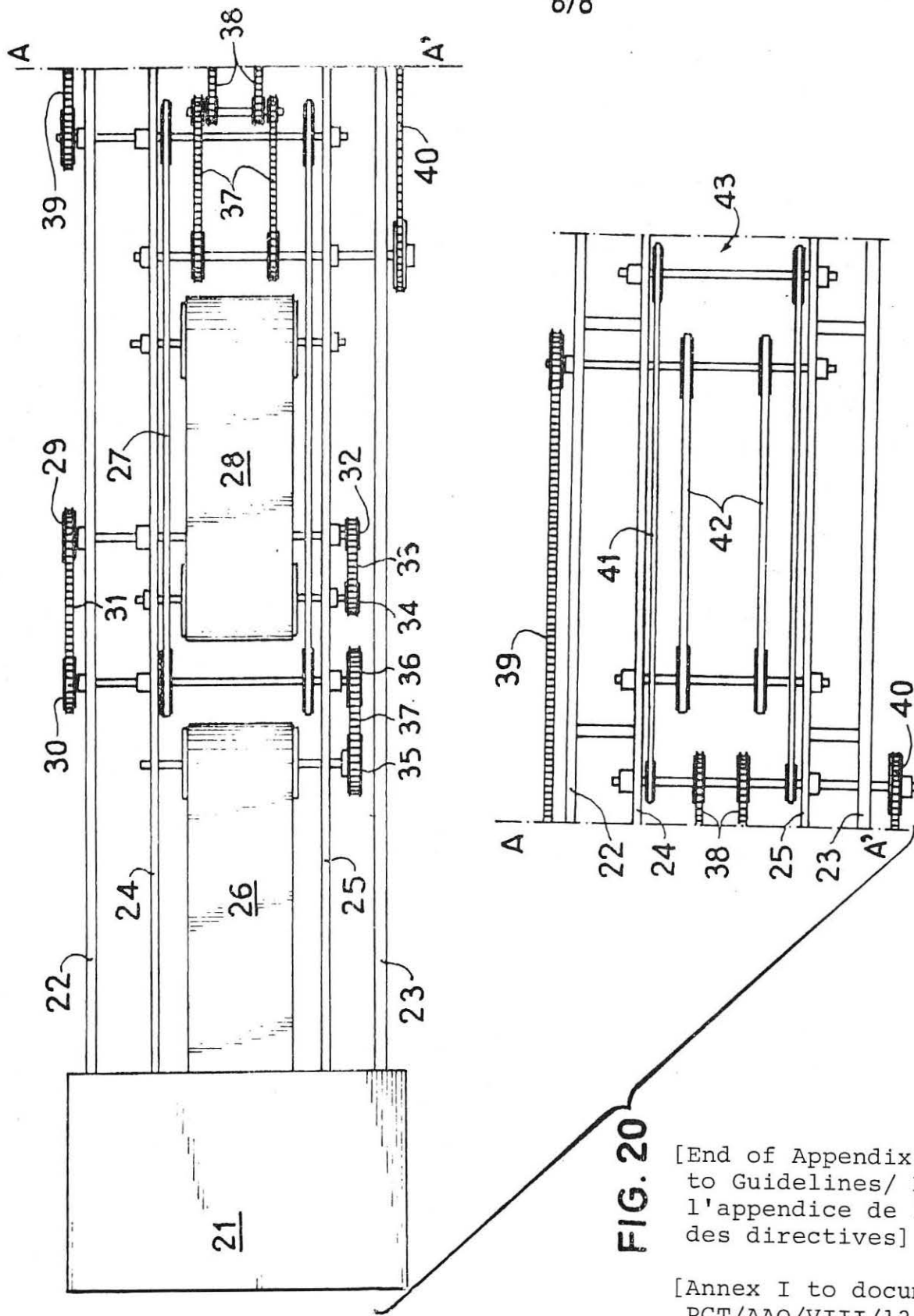


FIG. 18

FIG. 19





**FIG. 20**

[End of Appendix to Annex  
to Guidelines/ Fin de  
l'appendice de l'annexe  
des directives]

[Annex I to document  
PCT/AAQ/VIII/12 follows/  
L'annexe I du document  
PCT/AAQ/VIII/12 suit]

PATENT OFFICE  
JAPANESE GOVERNMENT

4-3, Kasumigaseki 3-chome  
Chiyoda-ku, Tokyo, Japan

TOKU SO 420/52  
April 22, 1977

Mr. F.A. Swiridov  
Deputy Director General  
World Intellectual Property Organization  
32, chemin des Colombettes  
1211 Geneva 20, Switzerland

Dear Sir:

Please find enclosed the comments of the Japanese Patent Office concerning the guidelines on drawings under PCT, as presented to the meeting of the Working Group on guidelines for publication and for drawings, Feb. 21 + 25, 1977 in Geneva.

Yours truly,



Kazuo Hoshikawa  
Counsellor in charge of  
PCT and TRT

A. General

1. It is desirable to make two sets of guidelines on drawings, that is to say one set for PCT Authorities for checking the drawings submitted to them and another set to give instructions to those who would actually be making drawings. And if possible, the latter should be incorporated in the Guidelines for Applicants.

2. The guidelines for PCT Authorities should be made on the basis of PCT regulations related to drawings, that is to say, picked out from regulations in PCT Rule 11, and also on the basis of regulations in Rule 26.3. As for the guidelines for those who actually make the drawings, they need not always be based on PCT regulations, as they should be made from the standpoint of giving information on making drawings to those who actually draw them. Thus, it is desirable that as much information as possible on drawings would be included, provided that such information is not contradictory to the one included in the former guidelines.

3. Throughout the paragraphs of both Guidelines, the wording of PCT regulations should be used as much as possible, and PCT regulations related to drawings should be cited by the number of the provision cited, for instance, Article so and so rather than quoting the whole passage of such a provision.

B. In Detail

1. Guidelines as mentioned in PCT/WG/GPD/I/5

2.2: It is desirable to rewrite par. 2.2 to reflect the purport contained in Rule, 11.1 and 11.2 (a).

4.2: The 4th paragraph of 4.2 is not necessary.

7.1. The parts relating to the use of "blue" in 7.1 should be rewritten in accordance with the conclusion indicated in PCT/WG/GPD/I/7 par. 27.

7.3.1: The second paragraph is not necessary. It should be mentioned

in the Guidelines for those who execute the drawings.

7.5.4: 3rd par. 2nd sentence beginning with "This situation....." to the end of the 4th par. is not necessary.

7.5.5: 2nd par. "There would be....." is not necessary. It is preferable that the passage be incorporated in the Guidelines for those who execute the drawings.

10: This paragraph is not necessary.

11.1 and 11.2: In the two paragraphs, the use of the word "annex" and "annexed" should be avoided as it may cause confusion as to whether what is to be annexed is part of the specification or of the claim.

## 2. The Guidelines for the executors of drawings

We believe it is desirable that the guidelines be made on the basis of the draft guidelines included in PCT/AAQ/VII/11. But to give a character proper to the guidelines, expressions implying a judgement of PCT Authorities should be avoided as regards matters which are not indicated directly in the PCT regulations related to drawings. Further, the part concerning the writing of claims (for instance, pars. 61 and 62) and the part concerning the amendment of drawings in various designated States (Part D) are not necessary.

[Annex II follows/  
I,'annexe II suit]

TRANSLATION

State Committee for Inventions and Discoveries  
of the USSR Council of Ministers

No. 10/11-593/45

May 25, 1977

Dear Dr. Sviridov,

I am sending you comments and suggestions of the  
State Committee to WIPO document "Guidelines on Drawings"  
(document PCT/WG/GPD/I/5).

Sincerely yours,

Y. MAKSAREV  
Chairman of the  
State Committee

Mr. F. A. Sviridov  
Deputy Director General  
WIPO  
Geneva  
Switzerland

T R A N S L A T I O N

Comments on the "Guidelines on Drawings"  
(PCT/WG/GPD/I/5)

1. Photographs and requirements in respect of photographs are not mentioned in the Guidelines. However, in a number of cases, photographs can be used in the application as a necessary kind of illustration which could not be replaced by a drawing (for example, an image of a microstructure of a metal or alloy and in some other cases).

2. It should be clarified whether it is necessary to arrange chemical and mathematical formulae (as is done at present in the United Kingdom) on separate sheets by analogy with drawings and to mark them by Roman or Arabic numerals.

3. Item 3. The type of paper for preparation of drawings should be clarified. It is very advisable that the sheets of drawings of an application should be fastened together with a folder.

Item 5 (last portion). Is it necessary to give a number to the so-called "whole figure" drafted in a reduced scale, indicating the positions of the cross-sections? It would appear advisable to give the number of the whole figure by way of Arabic numerals and the same number given to the whole figure should be given to the partial figures of the whole figure by way of a letter of the Latin alphabet.

4. Item 5.3 (last portion). It is advisable when adding a figure drafted in a reduced scale with a view to showing how the partial figures of the drawings are put together and where the cross sections are taken, to give a number to such figure marked

2.

by an Arabic numeral and the partial figures should then be marked by the same number accompanied by a letter of the Latin alphabet (for instance, 7, 7a, 7b, etc.).

5. Item 7.1. With a view to maintaining good quality of the drawings used for reproduction, it should be prescribed that only a black color should be used.

6. Item 7.2. The possibility of use of shading in figures of drawings, as provided for in this item, does not take into consideration the problems of subsequent reproduction of the drawings. Such possibility only underlines legibility of the original drawing. The problem of reproduction should also be taken into account and, therefore, recommendations concerning the methods of shading are necessary, e.g., the use of dots, hatching, etc., to provide the necessary quality for "contrasting" methods of reproduction of the drawings.

7. Item 7.4. The requirement for drawings of a scale which is large enough to provide legibility after reduction when reproducing the drawings should be specially applicable only to those figure(s) which may be chosen for illustration in the Gazette, abstract card, etc., so that it can be subjected to linear reduction. This requirement may not necessarily be applicable to the minor figures of the drawings.

8. Item 7.5.1. The expression "at least" seems to be superfluous since extending of a line of a reference sign on the drawing outside the reference sign has no meaning.

9. Item 7.5.5. The proposed system of reference signs and numbering of figures of drawings according to which the common figure "15" should be indicated by "115" in Fig. 1 while the corresponding feature would be indicated by "215" in Fig. 2 seems to lead to misunderstanding and ambiguity especially when there are numerous figures since the indication in the text of the description as "115" could be understood also as the common feature "5" in Fig. 11, etc.

A numeral designating a number of a figure of the drawings should be indicated either separately or it should differ from the designation of the common feature by a manner of indication or, in the case of an application of the proposed system, it should be separated by a dot or parentheses. In the other version of the use of the system of designations, it is advisable to maintain the number of the common feature on all figures without any change, as it has already been given when the said feature was first mentioned.

10. Item 8. It should be clarified where text matter (words or numerals) should be put in block schematics (inside the block or next to it).

11. Item 10 (third portion). The prohibition which is contained in this item of introducing as drawings any "new material" requires a clarification. Apparently, any material which essentially changes or amends the drawings filed earlier and, as a consequence, changes the substance of the invention, should be considered as new material. Additional drawings which do not change the substance and the scope of the invention and only needed to facilitate, for instance, the understanding of the drawings filed earlier or to eliminate "clerical errors" mentioned in the first portion of item 10 apparently should not be considered as "new" and therefore should not be considered as unacceptable material for the purposes of amendments.





**THE PATENT OFFICE**  
25 Southampton Buildings London WC2A 1AY

Telegrams Patoff London WC2

Telephone 01-405 8721 ext

---

Mr E M Haddrick  
Head of the Patent Cooperation Treaty Division  
WIPO  
32 Chemin des Colombettes  
1211 Geneva 20  
Switzerland

Your reference

Our reference IPCD 40118 40120

Date 17 December 1976

---

Dear Mr Haddrick,

I have pleasure in enclosing the observations and comments of the United Kingdom delegation on the following documents:-

- (1) Draft Guidelines for publication under the PCT (PCT/AAQ/VII/4).
- (2) Draft Guidelines for the presentation and execution of drawings under the PCT (PCT/AAQ/VII/11).
- (3) Draft Guidelines for the International Searches to be carried out under the PCT (PCT/TCO/VI/8).
- (4) Draft Guidelines for International Preliminary Examination to be carried out under the PCT (PCT/TCO/VI/9).

These are forwarded, as requested by the Secretariat, for consideration by the TCO and AAQ Working Groups which are to take place next February.

I wish you a very happy Christmas.

Yours sincerely,

M F VIVIAN  
(patents 2).

Observations of the United Kingdom on the guidelines on the presentation and execution of drawings under the PCT (PCT/AAG/VII/11)

General

page 1 para 3

This paragraph refers to the fact that the present guidelines are in a large measure based on the draft EPO guidelines CI/GT III/112/76. In fact the EPO guidelines have been very substantially revised (cf CI/198/76) so that the present EPO guidelines are only about half the length of the original draft.

A primary question which was considered in re-drafting the EPO guidelines was to whom they were directed. This needs to be done for the PCT guidelines. If they are directed to applicants unaccustomed to preparing drawings (draftsmen would know what to do anyway), they should be short and concise giving a few illustrations of suitable drawings. If they are directed to formalities officers in Receiving Offices they should not contain information on the preparation of drawings. The EPO decided that they should be directed to formalities officers. We suggest that WIPO does likewise and incorporates these guidelines as a separate section in the Receiving Office guidelines. The EPO also took a number of other decisions which shortened the guidelines and could well be adopted

page 3 para 6

for the PCT guidelines. In particular:-

- (i) Photographs are not regarded as drawings and should not be referred to (cf page 4 para 7 and page 6 para 15).
- (ii) The EPO guidelines to a large extent only deal with the requirements of the convention. Advice to persons who prepare drawings and recommendations have been kept to a minimum (cf page 3 para 2 of the present guidelines). The wording of paragraphs 3 and 4 page 3 of the present guidelines is not considered sufficient to distinguish between recommendations and mandatory requirements. The distinction should be clear from the text. In many cases the use of brackets in the text is confusing.
- (iii) Repetition of Rules set out in the European Patent Convention has been kept to a minimum.

We recommend that the PCT Working Group adopts a similar approach.

The requirements for chemical and mathematical formulae and tables should not be included in this document as they are not drawings (see also page 4 para 9 third sentence and page 6 para 15 second sentence). If desired formulae and tables could be dealt with in a separate section but they should not be referred to as drawings. Of course

a chemical formulae which satisfies all the requirements for drawings can be presented as a drawing.

### Introduction

Page 4 para 8 and the first sentence of para 9 are superfluous.

para 9 - Second sentence (see observations on page 3 para 6).

para 10 line 7 - should refer to the "abstract" as well as "and possibly the abstract".

page 5 para 11 - "preparation" in line 1 should read "formulation".

para 12 - The last four lines of this paragraph are not understood.

para 13 - This needs clarification eg "It is further to be noted that Rule 11.13(c) requires that ..... should ..... and the general principle enunciated above must also be interpreted in the light of these requirements".

para 14 - The last two lines of this paragraph are not consistent with para 63.3 otherwise figures 1-3 would be crossed through.

### PART A

page 6 para 16 We suggest that para 16.1 and the first two sentences of paragraph 16.2 are superfluous. It is well known what flow sheets and diagrams are. N.B. Figure 8 is not a flow diagram as suggested in para 16.2.

para 16.3 This cannot always be true eg for something like a TV colour decoder.

page 7 para 17 (see observation on page 3 para 6)

para 18.2 The marginal reference should be to Rule 10 (1)(d) the last two sentences of this paragraph are appropriate to drawings (cf observations on para 17).

page 7 para 19.2 Deals to a large extent with matter not required by the PCT. Under the PCT these guidelines can and  
page 8 para 19.2 only point out that the description containing such tables should be sufficiently clear to a skilled reader.

page 8 para 19.2 The last sentence of this paragraph does not seem to be correct (cf Rule 11.10(c)).

The use of brackets within brackets in this paragraph causes confusion. Moreover, it is not clear who is to apply the guideline in this and the previous paragraph. Is this not a matter for national offices.

page 8 paras 20-20.3 The guidelines should not deal with photographs at all.

### PART B

page 9 The heading "Documents Making up the International Application which contain drawing" is not clear. It could be deleted.

page 10 para 26 It is not clear why this is underlined it is not a quotation from the Rules. The last sentence of this paragraph should read "The selected figure(s) is (are) published with the abstract."

para 26.1 This seems to suggest special figures are required for the abstract. This is not correct, the applicant (or ISA) merely selects one or more of the drawings accompanying the description. (cf para 26.2). We suggest deletion of para 26.1.

para 28 It is not clear why quotation marks are provided. This is not a direct quotation from Rules 11.3 or 11.5.

para 28.1 - are largely superfluous and have been deleted  
28.5 from the EPO guidelines.

page 11 para 30.1 This paragraph should begin at "Correction must be durable ....". The earlier part of the paragraph is largely superfluous.

page 12 para 31.1 We do not agree that tagged holes are unallowable. The second sentence of this paragraph is not understood. The last sentence is unnecessary.

page 12 para 33.1 It would be preferable not to include a frame in sheet I/8 at all.

page 13 para 35.2 The Appendices are not consistent with the numbering proposed in the second half of this paragraph. However, since drawings or description could be cancelled during examination procedure, it might be simpler to start each with a separate series of numbers.

page 14 para 38.3 The words "the two" in line 4 should be deleted.  
para 38.4 This paragraph should also make it clear that constructional details of parts of the devices not concerned with the invention need only be indicated in outline or diagrammatic fashion.

Page 15 para 39.1 The first two sentences of this paragraph are unnecessary.

para 39.2 The recommendation in the last sentence of this paragraph is not clear but, in so far as it is understood, could be terribly wasteful in some cases and certainly should not be a requirement.

para 39.5 The whole of this paragraph should be in brackets.

page 16 para 40.2 This should read " .. neither figure may contain parts of the other".

para 40.5 The use of a smaller scale figure showing how the parts are joined could cause problems. Presumably this will be schematic otherwise on photocopying it could be come obscure. Figure 20 does not carry out this proposal.

page 17 para 40.6 Delete "for instance".

para 42 This is not a direct quote therefore it is not clear why it is underlined.

para 42.1 This all seems unnecessary and, if anything, should go in the RO Guidelines.

#### PART C

page 18 para 43 This para is unnecessary.

para 44.3 This para is somewhat confusing and unnecessary

para 44.4 It is not understood what is meant by "process copier".

page 19 para 44.5 This is a matter of technique for the person who prepares the drawings and should not be included in the guidelines.

para 44.6 These paragraphs could be dispensed with they are  
 44.8 and not included in the EPO guidelines.  
 44.9, 44.10

The reference to lines drawn free hand in para  
 44.8 is contrary to Rule 11.13(f) (cf Figure 11).

page 20 para 46- All except the first sentence have been deleted  
 46.1 from the EPO guidelines.

page 21 paras 49 The separation into identification and indication  
 49.1 and 50 end of cross-sections is confusing. These paragraphs  
 50.1 need clarification and should be integrated with  
 para 48. Para 50.1 is superfluous in view of para  
 48. This whole passage has now been considerably  
 curtailed in the EPO guidelines. The reference to  
 "section on A" in para 50 offends Rule 11.13(e).  
 Para 49.1 is dealing with something different from  
 Rule 11.13(b).

The problem referred to in the latter half of  
 para 50 re-text on drawings is avoided if Rule  
 5.1(a)(iv) is fully carried out.

page 22 para 52.1 Rule 11.13(c) has nothing to do with cutting up  
 drawings.

page 24 para 56.2 Reference should be made to Rule 11.13(c) and not  
 11.13(e).

page 25 para 60.1 These paragraphs are not relevant to drawings and  
 page 26 para 62.1 should be deleted.

page 27 para 63.1 The use of primes probably offends Rule 11.13(e)

Page 27 para 63.2 This paragraph is not of relevance to drawings  
 guidelines.

page 27 para 63.3 Since figures 1-3 are incorrectly drawn they  
 should be struck out (cf para 14).

page 29 para 68.2 The first half of para 68.2 is not really consistent  
 with para 67.1.

page 31 paras 69-71 These paragraphs are not really appropriate to  
 PCT guidelines and are not peculiar to drawings  
 alone.



UNITED STATES DEPARTMENT OF COMMERCE  
 Patent and Trademark Office  
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
 Washington, D.C. 20231

~~PCT/AAQ/VII/11~~  
~~Annex, page 3~~

May 3, 1977

Mr. Klaus Pfanner  
 Deputy Director General  
 World Intellectual Property Organization  
 32 chemin des Colombettes  
 1211 Geneva 20,  
 SWITZERLAND

Re: Revision of Guidelines for Drawings

Dear Mr. Pfanner:

The attached revision is submitted in accordance with the offer made by the United States representative at the meeting of the Working Group on Guidelines for Publication and for Drawings to markup the PTO drawing guidelines for use under the PCT.

This revision does contain informational matter in view of the decision of the Working Group "that material of an informative nature relating to the manner of execution of drawings could be useful, ..." (PCT/WG/GPD/L/7, paragraph 55).

Sincerely,

*Louis O. Maassel*  
 Louis O. Maassel  
 Office of Assistant Commissioner

GUIDELINES ON THE PRESENTATION AND EXECUTION  
 OF DRAWINGS UNDER THE PATENT COOPERATION TREATY (PCT)

INTRODUCTION

directed to ~~EXPLANATORY NOTES~~  
 relating to drawings } 1. These Guidelines are ~~taken in all but a few details from the Regulations under the Patent Cooperation Treaty (PCT) (PCT Rule 11).~~  
 for easy reference } They reproduce, at least, in part, the text of the Rules concerning drawings, together with comments, observations and explanations regarding interpretation. The provisions of the Regulations under the PCT relevant to a particular paragraph are cited on the left-hand margin opposite the paragraph concerned.

the various international authorities and also for } 2. The Guidelines should provide a handy aid and reference material for those persons who prepare such drawings--applicants and their attorneys or agents and draftsmen--~~and~~ those persons whose task it is to see that the drawings comply with the various physical requirements under the PCT/ in

for purposes of achieving some degree of uniformity } 3. It is to be noted that these Guidelines are meant to be recommendations and not mandatory requirements to the extent that they specify ~~rules of practice~~ beyond the scope of the Regulations under the PCT. ~~are~~ [details]

~~4. Bracketed subject matter occurs in the Guidelines when a proposal of particular relevance is made despite the fact that it is unsupported, although not excluded, by the PCT.~~

~~5. In the preparation of these Guidelines, certain problems were discovered in connection with chemical and mathematical formulae, tables and photographs.~~

4.6. As explained in Part A of the Guidelines, figurative representations, i.e., chemical and mathematical formulae and tables, are not considered as drawings under the Regulations of the PCT. Nevertheless, to the extent that such figurative, [graphic and reproduced by means similar to] representations are produced by the same means as drawings (i.e., by drawings proper or by graphic representation), they may be treated in the same manner as drawings. [are also these guidelines]

PCT/AAQ/VIII/12  
 ANNEX IV/ANNEXE IV



5. Photographs are not mentioned in the PCT or the Regulations thereunder, Notwithstanding the fact that it is not clear whether photographs should be considered as drawings, it was thought more logical to consider photographs as drawings under certain conditions and so these Guidelines also deal with them.

photographs may be necessary for the understanding of an invention, therefore

INTRODUCTION

6. ~~A picture tells a thousand words. This commonplace saying is very true of the patent field, and especially so of the drawings in an international application filed under the PCT.~~ Drawings are an international language, a particularly important factor when documents have to be translated into several languages. While a translation, however carefully done, may always betray the author's true intentions, since every language has its own particular means of expression, a drawing needs no alteration in order to be understood all over the world.

this is technical not reflect good

7. The same is true of chemical and mathematical formulae, which should be treated as drawings in the sense that they give universally comprehensible expression to specific concepts. ~~These Guidelines apply throughout to chemical and mathematical formulae without this having to be stated on each occasion; the term "drawing" may apply to both drawings proper and to figurative representations such as [chemical and mathematical formulae, tables] and photographs.~~

Purpose of the Guidelines

8. The drawings, if any, in an international application are of prime importance. The international application is either published in English, French, German, Japanese or Russian, or if filed in another language, in English translation. Anyone consulting the contents of a published international application who does not know the language in which the description, claims, etc. are drawn up, thus has only the drawings from which to gain an idea of the content of the application. Hence the importance of Guidelines to ensure that drawings are clear. This point must always be borne in mind by both draftsmen and persons whose task it is to check drawings, in the interests of inventors, of the national Patent Offices and of the general public.

and possibly the abstract and easily understood it is draftsmen, and

The is that the 9. One general principle has prevailed in the preparation of all the drawing requirements under the PCT drawings must be clear, legible and comprehensible. The ideal to be aimed at is a situation in which a look at the drawings and the description would show the reader not only the technical field covered by the invention, but also, and above all, the technical contribution it makes.

which formulation

10. Working on this principle, anything which might make a drawing unclear, or its meaning uncertain, must be corrected or altered, whereas features, or particular interpretations set forth in these Guidelines, which are designed to clarify drawings or the presentation of drawings may be permitted provided they are not detrimental to this principle.

11. An object of certain provisions of the Guideline is to preserve this principle whenever documents are reproduced by any means with a linear reduction in size to two-thirds.

Rule 11.13(c)

Contents of Appendix

13. The Appendix to the Guidelines contains many examples of drawings designed to show the various ways in which the Regulations under the PCT quoted and comments thereon may be applied, or, in some cases, errors that are to be avoided. For the latter, the identification of incorrect figures is crossed through with two thin lines.

commented upon in these Guidelines

12. These Guidelines deal with the requirements for drawings that are a part of international applications and are intended to be used primarily by the various international authorities to determine the acceptability of the drawings submitted in international applications. These Guidelines should also be useful to applicants, attorneys, agents and draftsmen when preparing such drawings.

GUIDELINES ON DRAWINGS

When drawings are required

The situations in which a drawing is required under the PCT are set forth in Article 7 and Rule 7.2 of the Treaty.

[Insert text of PCT Article 7 and PCT Rule 7.2]

PART A

CHAPTER X

DRAWINGS

~~This Chapter of the Guidelines deals with the requirements to be met by drawings contained in the application or patent.~~

1. ~~Graphic forms of presentation considered as drawings~~ which are to be

~~All types of technical drawings are considered drawings within the meaning of the Convention; this includes, for instance, perspectives, exploded views, sections and cross-sections, details on a different scale, etc. Drawings also cover "flow sheets and diagrams", under which are subsumed functional diagrams and graphic representations of a given phenomenon which express the relationship between two or more magnitudes.~~

~~There are also other graphic forms of presentation which may be included in the description, claims or abstract, in which case they are not subject to the same requirements as drawings. The forms concerned are chemical and mathematical formulae and tables. These are dealt with in X, 11. They may nevertheless be submitted as drawings, in which case they are subject to the same requirements as drawings.~~

2. Presentation of drawings  
2.1 All drawings figures must be grouped and arranged on the sheets specifically for drawings and may in no event be included in the description, claims or abstract, even if these finish at the top of a page or leave sufficient room, and even if there is only one figure.

PART A

CHAPTER X

PCT Rule 11.2(a) 2.2 In accordance with Rule 35, paragraphs 2 and 3, the drawings "shall be filed in three copies" and must be so presented as to admit of direct reproduction by photography, electrostatic processes, photo offset and micro-filming, in any unlimited number of copies.

PCT Rule 8.2 2.3 As regards the figure, or figures in exceptional cases international figures, to accompany the abstract, where an European patent application contains drawings, reference should be made to III, 11.3 and B XI, 4(f) and 5. The figure(s) illustrating the abstract must be the figure(s) most representative of the invention and must be chosen from the drawings accompanying the application.

The abstract may be illustrated by one or more figures only if the application itself contains drawings. The figure that will accompany the abstract at publication It is therefore not permissible to draw a special figure for the abstract which differs from the other figures in the application. flexible

3. Conditions regarding the paper used  
Drawings must be on sheets of A4 paper (29.7 cm x 21 cm), which shall be pliable, strong, white, smooth, matt and durable". "All sheets shall be free from cracks, creases and folds." "Only one side of the sheet shall be used." cracks; they shall not be folded

PCT Rule 11.5  
PCT Rule 11.3  
PCT Rule 11.2 (b)&(c) non-shiny] each] Rule 35(14)  
PCT Rule 11.12 in exceptional cases,] "Each sheet shall be reasonably free from erasures and shall be free from alterations, over-writings and interlineations. Non-compliance with this Rule may be authorised if the authenticity of the content is not in question and the requirements for good reproduction are not in jeopardy."

The aim of these provisions is to obtain a good quality reproduction of the original drawings which is as clear as possible. Erasures on an original sometimes reappear on a reproduction. . . / . . .



PART A

CHAPTER X

submitted in the form of replacement sheets, which must comply with all of the requirements for original drawings.

Any corrections made must be ~~permanent~~ and ~~so that they cannot give rise to any doubt~~. They must be made on all copies of the application. Special products for corrections, such as white masking fluid, may be used, provided they are indelible and comply with the other requirements under Rule 35, paragraph 14.

Rule 35(5) so All of the international application, ~~"The sheets shall be connected in such a way that they can easily be turned over, separated and joined together again"~~.

PCT Rule 11.4(b) when consulted, and easily

if placed thru holes which are placed in the left hand margin in accordance with standard I.S.O. 838-1974 (E).

Removable ~~Permanent~~ fastenings (for example, ~~crimped cyclets~~) are not permitted. Only temporary fastenings (staples, paper clips and grips, etc.), which leave only slight marks in the margin, may be used.

also

The presentation of the of drawings must conform to certain rules regarding the useable surface area and the numbering of the various sheets used.

Presentation of the sheets of drawings

4.1 Usable surface area of sheets

surface  
"On sheets containing drawings, the ~~usable surface area~~ shall not exceed 26.2 cm x 17.0cm. These sheets shall not contain frames around the usable or used surface. The minimum margins shall be as follows: top side: 2.5 cm; left side: 2.5 cm; right side: 1.5 cm; bottom: 1.0cm."

PCT 11.6(e)

Under ~~Rule 35, paragraph 7~~, no entries may be made in the margins. The drawings must be so set out that they do not overlap into the minimum margin defined in ~~Rule 32, paragraph 1~~.

Rule 35(7)

PCT Rule 11.6(e)

The margins "must be completely blank."

PCT Rule 11.6(c)

PART A

CHAPTER X

4.2 Numbering of sheets of drawings

PCT Rule 11.7

~~Rule 35(8)~~

numbers

international  
"All the sheets contained in the ~~European patent~~ application shall be numbered in consecutive arabic numerals. These shall be placed at the top of the sheet, in the middle, but not in the top margin".

regardless of the positioning of the figures

PCT Rule 11.6(c)

~~Rule 32(1)~~

exact middle at the top

to provide sufficient

The sheets of drawings must be numbered within the maximum usable surface area as defined in ~~Rule 32, paragraph 1~~. Instead of numbering the sheet in the middle, it will, however, be acceptable for it to be numbered towards the right-hand side, if the drawing comes too close to the middle of the edge of the usable surface. This numbering should be clear, for example in numbers larger than those used for reference numbers.

PCT Rule 11.7(a)

~~Rule 35(5)~~

PCT Article 3(2), an international

elements: a one or more

(when required) and an

requirements

Section 208 of the Administrative Instructions under the PCT provides that the numbering of sheets be effected by the use of 3 separate series of numbering. The first series of numbers shall be applied to the request only, and shall commence with the first sheet of the request. The second series of numbers shall be applied to the the remaining elements of the text and the third shall be applied to the drawings.

~~Rule 35, paragraph 8~~, requires all application sheets to be numbered consecutively. According to ~~paragraph 5 of Rule 35~~, the application consists of all the following documents: the request, the description, the claims, the drawings and the abstract. Taking these two paragraphs of Rule 35 together it might appear, therefore, that all the sheets making up the application must be numbered consecutively. However, what is really meant is that all the sheets making up one and the same document should be numbered consecutively and that each document should be numbered from 1.

required  
It is therefore recommended that the sheets of drawings be paginated from 1 onwards as follows:

consecutively

PART A

CHAPTER X

with the 1 ~~The number of each sheet should be~~ shown by two arabic numerals placed either side of an oblique line, the first being the sheet number, and the second being the total number of sheets

It should be noted, in particular, that the sheets of drawings should contain no entry such as "plate" or "sheet" which would entail having to translate such terms, thereby raising problems for sheets on which no other wording appears.

Sheets should be numbered in characters larger than those used as reference signs in the drawings to avoid any confusion with the latter.

placement of figures and figure numbering. Figures

used of drawings, with no other marking. For example, "2/5" would be written for the second sheet of drawings of a file containing 5 sheets and "1/1" would be written in the case of a single sheet. used

5. General lay-out of drawings

The various figures on the same sheet of drawings must be laid out according to certain requirements as to ~~page-setting and numbering, and figures~~ divided into several parts must comply with particular requirements.

5.1 Page-setting  
Placement of figures

As far as possible, all figures of the drawings should be set out upright on the sheets. If a figure is broader than it is high, it may be set out so that the top and bottom of the figure lie along the sides of the sheet.

In this case, if other figures are drawn on the same sheet, they should be set out in the same way, so that all the figures on a single sheet lie along parallel axes.

The drawing should contain as many figures as may be necessary to adequately show the invention. The views may be plan, elevation, section, or perspective views, and detail views of portions or elements, on a larger scale if necessary may be used. Exploded views, with the separated parts of the same figure embraced by a bracket, to show the relationship or order of assembly of various parts are permissible. One figure should not be placed upon or within the outline of another figure.

PCT Rule 11.2(d)  
~~Rule 32(2)(h)~~  
PCT Rule 11.13(j)

lies parallel to and along the right

lie in the same position.

PART A

CHAPTER X

A spacing is recommended between each figure. They should not be separated by lines.

~~Where the sheet has to be turned in order to read the figures, the numbering should appear on the right hand side of the sheet.~~

5.2 Numbering of figures

~~Rule 32(2)(h)~~

~~"The different figures shall be numbered consecutively in arabic numerals, independently of the numbering of the sheets".~~

PCT Rule 11.13(k)

consecutively and

The figures should be consecutively numbered, if possible, in the order in which they appear.

This numbering should be preceded by the abbreviation "FIG", whatever the official language of the application. Where a single figure is sufficient to illustrate the invention, it should not be numbered and the abbreviation "FIG" must

should

~~Rule 32(2)(d)~~

~~not appear. Rule 32, paragraph 2(d), also applies to numbers and letters identifying the figures, i.e. they must be simple and clear and may not be used in association with brackets, circles, or inverted commas. They should also be larger than the numbers used for reference signs.~~

PCT Rule 11.13(e)

PCT Rule 11.13(e)

The figure numbers

PCT Rule 11.13(k)

PCT Rule 11.13(i)

~~An exception to Rule 32, paragraph 2(h), referred to above may be permitted only as regards partial figures intended to form one whole figure, irrespective of whether they appear on one or several sheets. In this case the whole figure may be identified by the same number followed by a capital letter (e.g. figures 7A, 7B).~~

The different figures should preferably be set out, as far as possible, on each sheet in ascending numerical order from left to right and from top to bottom. If one of two figures illustrates on a larger scale a detail from the other, each figure should be numbered separately, and if possible, consecutively.

~~PART A~~

~~CHAPTER X~~

5.3 Whole figure

~~Rule 32(2)(h)~~ "Where figures ~~drawn~~ on two or more sheets ~~are intended to form one whole figure, the figures~~ on the several sheets shall be so arranged that ~~the whole figure can be assembled without concealing any part of the partial figures~~".

PCT Rule 11.13(1) in effect a single complete } complete } any of the figures appearing on the various sheets } partial } partial figure }

Partial figures drawn on separate sheets must always be capable of being linked edge to edge, that is to say, no figure may contain parts of another.

~~The case may arise where the parts of a whole figure are drawn on a single sheet following a layout different from that of the whole figure, e.g. a very long figure divided into several parts placed one above the other and not next to one another on a sheet. This practice is permitted. However, the relationship between the different figures must be clear and unambiguous. It is therefore recommended that a scaled-down figure be included showing the whole formed by the partial figures and indicating the positions of the sections shown.~~

may be } single } parts } small } parts }

6. Prohibited matter

~~Rule 34(1)~~ The provisions as to the omission of ~~Rule 34(2)~~ prohibited matter within the meaning of ~~Rule 34, paragraph 1(a), (see III, 8.1 and C II, 7.1)~~ apply also to drawings.

PCT Rule 9.1 } PCT Rule 9.1 }

Rule 9.1(1), (ii) and (iv)

- "The international application shall not contain:
- (i) expressions or drawings contrary to morality;
  - (ii) expressions or drawings contrary to public order;
  - (iii) .....
  - (iv) any statement or other matter obviously irrelevant or unnecessary under the circumstances."

~~PART A~~

~~CHAPTER X~~

~~Rule 34(1)(e)~~ ~~various kinds of advertising/ Statements (or other matter of the type referred to under Rule 34, paragraph 1(e) (see C II, 7.3) which are likely to appear in drawings, are in particular various kinds of advertising; e.g. where the applicant includes in the drawing obvious business or departmental markings or a reference to an industrial design or model, whether registered or not. By so doing, matter would be introduced which is clearly irrelevant or unnecessary, which is expressly prohibited by Rule 34.~~

PCT Rule 9.1(iv) } clearly irrelevant or unnecessary may not } PCT Rule 9.1(iv)

7. Execution of drawings

7.1 Drawing of lines and strokes

~~Rule 32(2)(a)~~ ~~Rule 32, paragraph 2(a), sets certain standards for lines and strokes in the drawing, to permit of satisfactory reproduction by the various means described in Rule 35, paragraph 3.~~

PCT Rule 11.13(a) } PCT Rule 11.13(a) } PCT Rule 11.2(a) }

The drawings must be executed in black or blue. ~~Either of these colours may be used, but not together. Although permissible, the use of blue should, for technical reasons, be avoided as far as possible.~~

~~Blue prints seldom satisfy the other requirements for drawings and it is therefore strongly advised that copies of this type are not filed.~~

PART A

CHAPTER X

In all cases the thickness of the lines and strokes must take into account the scale, nature, execution and perfect legibility of the drawing and of the reproductions.

PCT Rule 11.13(f) ~~Rule 32(2)(1)~~ All lines must be drawn with the aid of drafting instruments ~~save those for which no instrument exists, e.g. irregular diagrams and structures.~~ except those which by their nature do not permit their use, ornamental]

Shading may, for instance, be used to indicate the shape of spherical, cylindrical, conical elements, etc. Flat parts may also be lightly shaded. Such shading is allowed in the case of parts shown in perspective but not for cross-sections. Only spaced lines may be used for shading, not fully blacked out areas. These lines must be thin, as few in number as possible and they must contrast with the rest of the drawings. Light is always assumed to fall from the top left-hand corner at an angle of 45°.

7.2 Shading  
The use of shading in figures is allowed provided this assists in their understanding and is not so extensive as to impede legibility.

7.3 Cross-sections  
7.3.1 Sectional diagrams  
Where the figure is a cross-section on another figure, the latter should indicate the position of the section and may indicate the viewing direction. [by arrows at each end

In making and representing cross-sections, certain conditions must be observed with regard to the indication and identification of the figures concerned and how they are to be represented.

Each sectional figure should be capable of being quickly identified, especially where several cross-sections are made on the same figure, e.g. by inscribing the words "Section on AB", or to avoid the use of lettering, by marking each end of the cross-section line on the diagram with a single Roman numeral. This [Arabic or

.../...

PART A

CHAPTER X

A cross-section represents that part of an object which is situated on a cutting surface. In industrial drawings, the cross-section is that part of the object which is behind the cutting surface from the point of view of the person looking at it. Cutting surfaces are generally plane surfaces and if they are not they must be defined precisely. Cross-sections must always follow the cutting surface, whatever it may be.

number will be the same as the ~~(Arabic)~~ numeral identifying the figure where the section is illustrated. For example, figure 22 illustrates a section taken along the line XXII - XXII of figure 21. [22-22 or

PCT Rule 11.13(b) parallel oblique]

7.3.2 Hatching  
A cross-section must be set out and drawn in the same manner as a normal view whose parts in cross-section are hatched with regularly spaced strokes, the space between strokes being chosen on the basis of the total area to be hatched.

The hatching should be at a substantial angle to the surrounding axes or principal lines, preferably 45°. The various parts of a cross-section of the same item should be hatched in the same manner. The hatching of juxtaposed different elements must be angled in a different way. In the case of large areas, hatching can be confined to an edging drawn around the inside of the outline of the area to be hatched.

Hatching should not impede the clear reading of the reference signs and leading lines. Consequently, if it is not possible to place references outside the hatched area, the hatching may be broken off wherever references are inserted. Certain types of hatching may be given a specific meaning.

in a linear] ~~Rule 32(2)(e)~~ PCT Rule 11.13(c)

7.4 Scale of drawings  
The ~~scale of the figure~~ must be such that all the essential details ~~would not be clearly distinguished from a photographic reduction in size to two-thirds, then the figure must be redrawn to a larger scale, and if necessary the figure should be split up into partial figures so that a linear reduction in size to two-thirds is still intelligible.~~ can be distinguished from a photographic reduction in size to two-thirds, then the figure must be redrawn to a larger scale, and if necessary the figure should be split up into partial figures so that a linear reduction in size to two-thirds is still intelligible.

~~The graphic representation of the scale of drawings in cases where its inclusion is considered useful must be such that it is still usable when the drawing is reproduced in reduced form. This excludes indications of size.~~

~~PART A~~

~~CHAPTER X~~

In exceptional cases, where required, the scale of the drawing may be graphically represented. Indications

such as "actual size" or "scale 1/2", both on the drawings and in the description, in favour of graphic representations of the scale. ~~are not permitted.~~

PCT Rule 11.13(d)

or

7.5 Numbers, letters and reference signs

Numbers, letters and reference signs and any other data given on the sheets of drawing, such as the numbering of figures, pages of the drawing, acceptable text matter, graduations on scales, etc., must be simple and clear, and not used in association with any brackets, inverted commas, circles or outlines whatsoever. ~~Signs such as 6' and 35" are not regarded as including inverted commas and are therefore permitted.~~

~~Rule 32(2)(d)~~

PCT Rule 11.13(e)

Numbers, letters and reference signs should preferably all be laid out the same way up as in the same direction the diagram so as to avoid having to rotate the page.

7.5.1 Leading lines

Lead lines are those the lines between reference signs and the details referred to. Such lines may be straight or curved and should be as short as possible. They must originate in the immediate proximity of the reference sign and extend at least as far as the features indicated.

Lead lines for certain reference signs may be omitted. Reference signs of this type, which are not connected to anything, will then indicate the surface or cross-section on which they are placed. In such cases the reference sign should be underlined to make it quite clear that the line has not been left out by mistake.

.../...

~~PART A~~

~~CHAPTER X~~

Leading lines must be executed in the same way as lines in the drawing, ~~vis. in accordance with Rule 32, paragraph 2(a).~~

~~Rule 32(2)(a)~~

PCT Rule 11.13(a)

7.5.2 Arrows

Arrows may be used at the end of the leading lines provided that their meaning is clear. They may indicate a number of points:

- (a) a freestanding arrow indicates the entire section towards which it points;
- (b) an arrow touching a line indicates the surface shown by the line looking along the direction of the arrow.

Arrows may also be used in appropriate cases to show the direction of movement.

7.5.3 Height of the numbers and letters in the drawings

~~PCT Rule 11.13(h)~~

Under ~~Rule 32, paragraph 2(g)~~, a minimum size of 0.32 cm is required for all numbers and letters used on the drawings so that their reduction in size to two-thirds remains easily legible.

~~Rule 32(2)(g)~~

PCT Rule 11.13(h)

The Latin alphabet should normally be used for letters. The Greek alphabet is to be accepted however where it is customarily used, e.g. to indicated angles, wavelengths, etc.

7.5.4 Consistent use of reference signs as between description, claims and drawings

"Reference signs not mentioned in the description and claims shall not appear in the drawing, and vice versa."

~~Rule 32(2)(i)~~

PCT Rule 11.13(1)

.../...

PART A

CHAPTER X

Reference signs appearing in the drawing<sup>s</sup> must be given in the description, and the claims taken as a whole. As regards use of these signs in the claims, reference should be made to C-III, 4.11.

Features of a drawing should not be designated by a reference in cases where the feature itself has not been described. This situation may arise as a result of amendments to the description involving the deletion of pages or whole paragraphs. One solution would be to ~~strike out~~ on the drawing reference signs which have been deleted in the description. ~~Such corrections would have to be made in accordance with Rule 35, paragraph 14.~~

delete ]

~~Rule 35(14)~~

Where for any reason a figure is deleted, ~~then of course the applicant or proprietor ought to delete~~ all reference signs relating solely to that figure appearing in the description and claims.

In the case of applications dealing with complex subjects and incorporating a large number of drawings, a reference key may be attached to the end of the description. This key may take whatever form is appropriate and contain all the reference signs together with

as a part thereof ]

PCT Rule 11.13(d)

.../...

PART A

CHAPTER X

the designation of the features which they indicate. This method could have the advantage of ~~standardising the terminology used in the description.~~ allowing an easier reference to the meaning of the various numerals and understanding of the drawings.

7.5.5 Consistent use of reference signs as between drawings ]

~~Rule 32(2)(i)~~

PCT Rule 11.13(m)

"The same features, when denoted by reference signs, shall, throughout the application, be denoted by the same signs."

international ]

figures ]  
or species ]

There would be considerable confusion if a single feature were allocated different reference signs in the various drawings. However, where several variants of an invention are described, each with reference to a particular figure, and where each variant contains features whose function is the same or basically the same, the features may, if this is indicated in the description, be identified by reference numbers made up of the number of the figure to which it relates followed by the number of the feature, which is the same for all variants, so that a single number is formed, e.g. the common feature "15" would be indicated by "115" in Fig. 1 while the corresponding feature would be indicated by "215" in Fig. 2. This system has the advantage that an individual feature and the figure on which it is to be considered can be indicated at the same time. It can also make complex cases involving many pages of drawings easier to read. Instead of the common reference sign being prefixed by the number of a figure, it may, when the individual variants are described with reference to particular groups of figures, be prefixed by the number of the particular variant to which it relates; this ~~should~~ be explained in the description.

system, should ]  
if used, ]

.../...

PART A

CHAPTER X

7.6 Variations in proportions

~~Rule 32(2)(f)~~  
PCT Rule 11.13(g)  
of the other elements  
in the figure, except  
where the use of a  
different

Each element of each, proper  
~~elements of the same figure shall be in~~  
~~proportion to each other, unless a difference in~~  
proportion is indispensable for the clarity of  
the figure."

should ] As a preferred alternative to a difference  
in proportion within one figure for the purpose  
of achieving the necessary clarity, a supplementary  
figure, may be added giving a larger scale  
illustration of the element of the initial figure.  
In such cases it is recommended that the  
enlarged element shown in the second figure be  
surrounded by a finely drawn or "dot-dash" circle  
in the first figure pinpointing its location without  
obscuring the figure.

8. Text matter on drawings

PCT Rule 11.13(e)  
~~Rule 32(2)(d)~~  
~~Rule 32(2)(g)~~  
PCT Rule 11.13(h)

It should first be noted that <sup>PCT Rules 11.13(e) & (h),</sup> ~~Rule 32,~~  
~~paragraph 2(d) and (g),~~ also applies to text  
matter on the drawings. } apply

~~For indications of the type "section on AB"~~  
~~see X, 7.3.~~

~~Rule 32(2)(j)~~  
PCT Rule 11.11  
a single word or  
words

"The drawings shall not contain text matter,  
except, when absolutely indispensable, a single  
word or a few words."

to facilitate the  
insertion of any ] Where text matter is deemed indispensable  
for understanding the drawing, a minimum of  
words should be used, and a space free of all  
lines of drawings should be left around them  
for the translation.

such as "water," "steam,"  
"open," "closed," "section on AB," and, in the case of electric circuits  
and block schematic or flow sheet diagrams, a few short catch words  
indispensable for understanding.

Any words used shall be so placed that, if translated, they may  
be pasted over without interfering with any lines of the drawings. "

.../...

PART A

CHAPTER X

~~As regards the justification for text  
matter on drawings, see C II, 5.1.~~

9. Conventional symbols

~~Rule 35(12)~~  
PCT Rule 10.1(d) & (e)

Known devices may be illustrated by symbols  
which have a universally recognized conventional  
meaning, provided no further detail is essential  
for understanding the subject-matter of the  
invention. Other signs and symbols may be used  
on condition that they are not likely to be  
confused with existing conventional symbols,  
that they are readily identifiable, i.e. simple,  
and providing that they are clearly explained in  
the text of the description.

Different types of hatching may also have  
different conventional meanings as regards the  
nature of a material seen in cross-section.

10. Amendments to drawings

Amendments of the drawings is permitted, as  
well as of the other documents. These  
amendments may be made at the request of the  
applicant. ] ~~party concerned or at the request of the~~  
~~European Patent Office.~~ The amendments may  
concern either clerical errors or more substantial  
changes.

Amendments to drawings are, in general,  
subject to the same rules as apply in respect of  
amendments to other application documents, ~~and~~  
~~therefore do not require further analysis here.~~  
Reference may be made to III, 13, to V, 2, to C-  
VI, 3, 4.6, 4.7 and 5 and to E II.

.../...

PART A

CHAPTER X

The general rule governing the admissibility of amendments, which the examiner must always bear in mind, is that they must not extend the content of the application as filed, i.e. they must not have the effect of introducing new material.

If drawings which depart substantially from the physical requirements laid down in the Rules are filed in order to establish a particular date of filing or retain a priority date, ~~the Receiving Section will permit such drawings to be amended or replaced~~ so as to provide drawings complying with the Rules, provided that it is clear that no new material is thereby introduced into the application. In view of this proviso, applicants should take care that any "informal" drawings which they file clearly show all the features necessary to illustrate the invention.

will be permitted

The description, the claims and the abstract may contain chemical or mathematical formulae.

11. ~~Graphic forms of presentation not considered as drawings~~ to be

11.1 Chemical and mathematical formulae

PCT Rule 11.10(b)

Chemical or mathematical formulae may be written by hand or drawn if necessary but it is recommended that appropriate aids such as stencils or transfers be used. For practical reasons formulae may be grouped together on one or more sheets annexed to the description and paginated with it. It is recommended in such cases that each formula be designated by a reference sign and the description should contain references to these formulae whenever necessary.

~~Rule 35(10)~~

PCT Rule 11.9(b)

drafting aids or materials

in

Chemical or mathematical formula may also be grouped together and be placed after the claims as drawings. In such a case, the chemical and mathematical formula must be drawn to comply with the requirements for drawings and the sheets must be numbered as drawing sheets.

The chemical or mathematical formulae must employ symbols in general use and must be drawn in such a way that they are completely unambiguous.

Numerals }  
~~Rule 35(13)~~

element of the application }

Figures, letters and signs which are not typed must be legible and identical in form in the various formulae, irrespective of the document in which they appear.

PCT Rule 11.9(d)

~~Rule 35(10)~~

PCT Rule 11.13(h)

~~Rule 32(2)(g)~~

Chemical or mathematical formulae appearing in the text of the application ~~or patent~~ must have symbols the capital letters of which are at least 0.21 cm high. Where they appear on sheets of drawings, these symbols must be at least 0.32 cm high.

should }

All mathematical symbols used in a formula which appears in a description, ~~in an Annex~~ or on sheets of drawings, must be explained in the description, unless their significance is clear from the context. In any case, the mathematical symbols used may be collated in a list.

11.2 Tables

11.2.1 }

In the description

~~Rule 35(11)~~

PCT Rule 11.10(c)

of }

an Arabic or }

For the sake of convenience, the tables may also be grouped together in one or more sheets annexed to the description and paginated with it.

If two or more tables are necessary, each should be identified by a Roman number, independently of the pagination of the description or drawings or of the figure numbering, or by a capital letter, or by a title indicating its contents, or by some other means.

.../...



and should  
Each line ~~or~~ column in a table ~~must~~ begin  
with an entry explaining what it represents and,  
if necessary, the units used.

PCT Rule 11.9] It should be remembered that the characters  
PCT Rule 11.9 must satisfy the requirements of ~~Rule 35,~~  
~~Rule 35(10)~~ ~~paragraph 10,~~ and that ~~Rule 35, paragraph 6,~~  
~~Rule 35(6)~~ regarding the maximum usable surface areas of  
PCT Rule 11.6(a) & (b)] sheets ~~applies~~ to tables as well.  
PVT Rule 11.6(a) & (b)] and that these requirements apply  
11.2.2] ~~to~~ - In the claims

The claims may include tables if this is  
desirable in view of the subject-matter  
PCT Rule 11.10(c) involved. In this case, the tables must  
be included in the text of the relevant  
claim; they may not be annexed to the claims  
nor may reference be made to tables contained  
in ~~or annexed to~~ the description. ~~Rule 29,~~  
PCT Rule 6.2(a)] ~~paragraph 6 (see C-III, 4.10)~~ stipulates that the  
claims may refer to other application documents  
only where this is absolutely necessary. The  
mere desire to eliminate the need to prepare  
further copies does not constitute absolute  
necessity.

12. Photographs and Photomicrographs (excluding photolithographs)

~~20.~~ The PCT makes no provision for the applicant to supply  
photographs or photomicrographs. Nevertheless, there are  
cases where a photograph is necessary, as it is sometimes  
impossible to draw what it shows, e.g., crystalline structures,  
metallurgical microstructures, textile fabrics, and grain  
structures. In such cases, the applicant can supply one or  
more photographs.

Photographs or photomicrographs may only be  
submitted where the invention cannot be clearly  
understood by using regular drawings.

12 ~~20.2~~ Such photographs to be acceptable must be made on  
photographic paper having the following characteristics  
which are generally accepted in the photographic trade :  
double weight paper with a surface described as smooth;  
tint, white.

12 ~~20.3~~ In any event, photographs must be submitted on sheets  
of A4 size (29.7 cm x 21 cm) with the minimum margins  
laid down in PCT Rule 11.6(c)