"PATENT D.I.Y"

A GUIDE :

HOW TO PREPARE A PATENT SPECIFICATION

"PATENT D.I.Y" A GUIDE : HOW TO PREPARE A PATENT SPECIFICATION provides an overview of contents of a patent specification*. As patent specification requires legal and technical information, it is quite complicated for beginners to start preparing the specification. Thus, this guide aims to assist inventors to prepare a complete specification according to a standard requirement. This guide is not meant for drafting a patent which is more complex. Thus, we **strongly** recommend inventors to contact a patent agent or qualified person for professional assistance before applying a patent.

** Specification is a term used to refer to the Description, Claims, Abstract and Drawings of this guide which reflect as part of requirements for a patent application. However, there the term "specification" is not a statutory term in the Patent Acts 1983 and Regulations.*

INTRODUCTION

A complete specification is made up of **Description, Claims, Abstract and Drawings (if any).** The specification should be drafted carefully. This is the document on which a patent, if granted, is based.

A few parts of explanation in this guide will refer to a complete sample of patent specification entitled "A Toothbrush" as attached.

A patent applicant may also refer to granted patents particularly the United States Patent Office (USPTO) and the European Patent Office (EPO) through Google Patents.

For patent application which involves sequence listing, Applicant may refer to granted patent EP 1185675 B1 as an example.

1. DESCRIPTION

The description must explain your invention fully at the time of filing because information cannot be added later. A patent will not be granted if your description does not contain sufficient information to enable others to construct or perform your invention. The Description is generally divided into a few subcomponents which are:

1. Title of the Invention
2. Technical Field
3. Background Art
4. Summary of the Invention
5. Brief Description of the Drawings
6. Detailed Description of the Preferred Embodiment

1.1 Title of the Invention

It should be noted that the title must indicate clearly and concisely the subject matter of the invention. For example, "A TOOTHBRUSH" as the title of the invention.

1.2 Technical Field

This part should describe the art or technology to which the invention relates. It should be noted

that the chosen title and the technical field should be consistent with the preamble (function or purpose of the invention) of the independent claim.

Several suggestions would be (choose one):

1. The present invention relates generally to … (explain function or purpose of the invention)…. .
2. The present invention relates generally to ……. particularly ……. .
3. The present invention relates generally to .....More particularly, this invention relates to ……. .

NOTE
In this part, it is advisable not to include any statement that relates to any advantages or the inventive concept of the invention. All the advantages will be discussed in the subcomponent "Detailed Description of the Preferred Embodiment".

For example:
The technical field would be:

- The present invention relates generally to a disposable toothbrush.
- The present invention relates generally to a toothbrush particularly to a disposable toothbrush.
- The present invention relates generally to a toothbrush. More particularly, this invention relates to a disposable toothbrush.

1.3 Background Art

This part should describe any prior art which can be useful for the understanding of the invention by discussing any disadvantages or problems with the prior art.

Several suggestions would be (choose one):

1. There has been various types of ……. . One of the prior art discloses .....Another prior art discloses ……. .
2. One type of known ……. . Another type of known ……. .

For example:
Describes briefly several relevant features of Toothbrush A and Toothbrush B in two short paragraphs by also stating their disadvantages.

NOTE
It is advisable not to include any statement that relates to the advantages of the invention. All the advantages will be discussed in the subcomponent "Detailed Description of the Preferred Embodiment".

1.4 Summary of the Invention

This part will explain the solution by the invention and the advantageous effects of the invention compared to the stated prior art. It is usually a repetition of the broadest claim (which is the independent claim) and then maybe several dependent claims.

NOTE
In preparing a patent specification, it is advisable to start with drafting the claims first then followed by other subcomponents.

A suggestion would be:

- According to the present invention, ……. (usually the independent claim).
- In an embodiment of the invention, the ……. (usually the dependent claim).

In this part, inserts all the claims accordingly to the above suggestions by constructing them in comprehensive sentences.

1.5 Brief Description of the Drawings

In this part, a series of relevant figures from different views are listed down together with a brief explanation in one short sentence.

It is a good practice to start with a figure which shows the overall overview of the preferred embodiment and then followed by figures which show more details of relevant parts of the preferred embodiment.

Several suggested views that may be included are the perspective view, plan/ top view, front view, side view, exploded view, rear view and cross-sectional view.

In this part, arrange the figures starting with the overall view of the toothbrush followed by the figure showing how it is operated and then, the details of the relevant parts of the toothbrush.

1.6 Detailed Description of the Preferred Embodiment

This part should describe the embodiment of the invention accordingly by referring to the listed drawings as above.

The explanation:

i. must describe the technical features of the preferred embodiment in a great detail and the interconnection with each others;
ii. must also include on how the preferred embodiment is operated.

NOTE
Embodiments mean different variations of the same inventive concept. They are used in the description and claims to maximized the scope of protection claimed in the patent i.e. an embodiment is an example of the invention.

In addition, if the invention consists of several other embodiments, the explanation should then continue describing the technical features of each of the embodiments in detail together with it's operation.

It is a good practice at the end of this part to emphasize the advantages of the invention.

A suggestion would be:
Referring to Figure 1 ……. .
Figure 2 shows ……. .
Figure 3 shows ……. .

While particular example of the present invention has been shown and described, it is apparent that changes and modifications maybe made therein without departing from the invention in its broadest aspect. The aim of the appended claims, therefore, is to cover all such changes and modifications which fall within the scope of the invention.

It should be noted that, each of the technical features in this part must be followed by reference number accordingly. It is a good practice to:

i. start with either two digit reference number (20, 22, 24 etc) or three digit reference number (110, 112, 114 etc);
ii. choose only to use even numbering (20, 22, 24, 26 etc) or odd numbering (21, 23, 25, 27 etc) as the reference number.

Let say, we choose only odd numbering as the reference numbers for the technical features of the invention. If at a later stage, several reference numbers need to be added, any even number between two related odd numbers may be used without having to renumber the technical features.

In this part, by referring to the features table as an example, the two digit odd numbering has been chosen starting with number 11.

Toothbrush 11	
Brush head 13	► *passageway 15*
	► *bristles 17*
	► *at least an openings 19*
	► *threaded spout 21*
Elongated cartridge 23	► *separator 25*
	► *toothpaste segment 27*
	► *water segment 29*
	► *threaded sleeve 31*
	► *stopper 33*
	► *rigid arm 35*
	► *end wall 37 (optional)*

Explain all preferred embodiments of the invention in great detail by emphasizing the relevant technical features together with their reference numbers, their connections, their operations and also the advantages of the invention.

2. CLAIM

Claims are important because they determine the scope of the monopoly given by a patent.

Claims must:

i. define the subject matter of the invention that the applicant intends to protect.
ii. be clear and concise.
iii. be fully supported by the description i.e. the technical features in the claims must have been described earlier in the description.

The claims must particularly point out the subject matter which the applicant regards as invention. The purpose for this requirement is to ensure that the scope of the claim is clear so that other people can understand the boundaries of the protection provided by a patent.

The clarity of the claims is of the utmost importance in view of their function in defining the matter for which protection is sought. Therefore, the meaning of the terms of a claim should, as far as possible, be clear for the person skilled in the art/ technology from the wordings of the claim alone.

The description and the claims should be consistent, otherwise it may render the claim unclear or unsupported.

The claims must be drafted in terms of the technical features of the invention. This means that claims should not contain any statements relating, for example, to commercial advantages or other non-technical matters, but statements of purpose should be allowed if they assist in defining the invention. Each of the technical features must also be followed with the same reference numbers of the technical features in the description and drawings accordingly and the reference numbers are placed between parentheses.

Patent claims usually consist of at least one independent claim and a few dependent claims.

Please also note that additional fees will be imposed for the number of claims exceeding 10.

Independent claim:

i. represents the broadest claim.
ii. does not refer to any preceding claim i.e. it stands alone.
iii. must include all the essential technical features of the invention i.e. all the elements that are indispensable for providing the effect of the invention and for solving the technical problem as defined
iv. must be drafted in a way that it must recite enough features so that the invention can work.

Dependent claim:

i. claim that depends on another claim.
ii. must have a reference to the depended claim at the beginning e.g. The toothbrush as claimed in claim 1 wherein...
iii. contains all the features of the independent claim and further features.
iv. defines further a feature already specified in any preceding claim.
v. may only narrow the scope of the claim to which it refers, not broaden it.
vi. usually used to describe particular embodiments of the specification.

3. ABSTRACT

An abstract is a summary of the invention. The purpose of the abstract is to help the reader to know what the invention is all about. The abstract should indicate the technical field of the invention, explain clearly how to understand the technical problem, the solution of the problem and the principal use of the invention.

The abstract must be in a one single paragraph and is recommended to consist of only up to 150 words. The abstract is often based on the independent claim but this is not always helpful.

In addition, each of the technical features in the abstract must also be followed with the same reference numbers of the technical features in the description and drawings accordingly and the reference numbers are placed between parentheses. Further, the abstract must also be accompanied by the most relevant figure in the drawings.

4. DRAWINGS

After completing the description of the invention prepare another component of the patent specification which is the drawings.

It is a good practice to start with a figure which shows the overall overview of the preferred embodiment and then followed by figures which show more details of relevant parts of the preferred embodiment.

Further, each of the technical features in the drawings must also be followed with the same reference numbers of the technical features in the description accordingly.

Besides that, it is advisable to label the technical feature defined in the technical field of the invention with an arrow while other technical features without arrow.

For example, in this part:

i. first, follow the arrangement of the figures where the overall overview of the toothbrush is Figure 1, followed by a figure showing its operation as Figure 2 and a design of a stopper with a rigid arm as Figure 3;
ii. second, label the toothbrush (the technical feature defined in the technical field of the invention) with an arrow while other technical features without any arrows.

5. SEQUENCE LISTING

In general, it is required that the description of a patent application should, where this is not self-evident, indicate the way in which the invention is capable of exploitation in industry. The invention claimed must have such a sound and concrete technical basis that the skilled person can recognize that its contribution to the art could lead to practical exploitation in industry.

In relation to sequences and partial sequences of genes, this is general requirement is given specific form in that the industrial application of a sequence or a partial sequence of a gene must be disclosed in the patent application. A mere nucleic acid sequence without indication of a function is not patentable invention.

In cases where a sequence or partial sequence of a gene is issued to produce a protein or a part of a protein, it is necessary to specified which protein or part of a protein is produced and what function this protein or part of a protein performs.

Alternatively, when a nucleotide sequence is not used to produce a protein or part of a protein, the function to be indicated could e.g., be that the sequence exhibits a certain transcription promoter activity.

6. GENERAL FORMALITY REQUIREMENT FOR SPECIFICATION

Specification documentations need to meet the formality requirements as follows:

i. all sheets excluding drawings (if any) and sequence listings (if applicable) shall be numbered at the top of the sheet and in the middle, in consecutive Arabic numerals [1, 2, 3, 4, …..].

ii. drawing or drawings shall be numbered at the top of the sheet of paper and in the middle consecutively but as a separate series [1/n, 2/n, 3/n,……], where n represent the number of sheets of the drawings.

iii. Sequence listing shall be numbered at the top of the sheet of paper and in the middle consecutively but as a separate series [SQL n, SQL n, SQL n,……], where n represent the page number of sequence listings.

iv. every fifth line of each sheet of the description and claims shall be numbered [5, 10, 15, 20, …..].

v. the minimum margins of sheets shall be 2cm. (left, right, top and bottom)

vi. text matter of the application shall be typed or printed in a dark, indelible colour in at least 1½ line spacing.

vii. each part of specification namely the Description, Claims, Abstract, Drawings shall start with a new page.

viii. Drawings shall be executed in durable, black, sufficiently dense and dark, uniformly thick and well-defined lines and strokes without colouring. (Coloured drawings are not allowed)

7. PATENT / UTILITY INNOVATION APPLICATION

Preparation before getting started:

i. prepare all the documents: Form 1 or Form 14, Form 17 (if any), Form 22 (if any) and the

specification.

ii. for online filing prepare all documents in digital format. All parts of specification should be prepared in separate files and to be uploaded individually. Please ensure that your attachments are in these formats: DOC, PDF or TIF.

iii. fee for respective forms are shown in the table below:

MATTERS OR PROCEEDINGS	(RM)	FORMS
Request for grant of patent	290.00	Form 1
Claim(s)		
• for 1st ten claims 1-10	Nil	
• for every additional claim (per claim) a) 11-20 b) 21-30 c) 31-40 d) 41 and above	 20.00 30.00 40.00 50.00	
Application for grant of certificate of utility innovation*	140.00	Form 14
Appointment or change of Agent	100.00	Form 17
Statement Justifying the Applicant's Right to A Patent/Certificate	100.00	Form 22

* For utility innovation application **only one claim** is allowed in Malaysia.