WHAT IS GOING ON BEHIND THE SCENES?

(Patent Attorneys' Workshop)

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1. Introduction

As regards the merits of patent attorneys' practice, it can be characterised by individual intellectual work where the sharing of tasks is practically out of the question. This special technical and legal activity may be mastered, as experience shows, during several years of practice and with permanent professional guidance to a level that enables patent attorney candidates to pass the qualifying examination and to perform their work individually, provided that they possess certain special, subjective capabilities.

Probably the individuality of patent attorneys' practice and the „inbreeding" character of candidates' practical training performed mainly within patent agencies are the reasons why studies on patent attorneys' practice (workshop), especially its methodology, are to be found very rarely (it is a rare bird) even in the international professional literature.

In the following, we would like to draw attention to some important aspects, without aiming at completeness, in order to provide an overview of the activities involved in this noble but not easy profession for experts just initiated to the practice of protection of industrial property and particularly for patent attorney candidates.

From the viewpoint of attorneys' practice, the first thing is to review the knowledge, skills and subjective requirements which are necessary for practising this profession at a proper level, besides the obligatory university diploma in engineering or natural scientific qualification as well as special legal training.

2. Personal Prerequisites

Due to the specific character of intellectual property laws, the patent attorneys' activities are fundamentally international; therefore practising it presupposes **the knowledge of foreign languages** at an appropriate level. In the current international practice, the „working languages" are mainly English and German.

Even during their domestic practice e. g. in Hungary, patent attorneys come across foreign language forms in the course of procedures before the Hungarian Patent Office or the competent courts dealing with intellectual property cases, preparing, respectively, search reports or expert's opinions in patent or utility model cases. In order to understand and evaluate literature, especially patent literature in a foreign lan-

guage, it is essential to be familiar with, the special terms used in the international patent practice in addition to general language skills.

Another personal prerequisite is the capability to perform certain **creative intellectual activities**. On the basis of practical experience, it can be established that at least the claim drafting is a particularly deep intellectually creative mental activity.

Another substantial subjective prerequisite is **the skill of empathy**. Patent attorneys should be able to project themselves into their client's position and line of thought in order to ensure the establishment of proper communication between them. On the other hand, patent attorneys should also be able to put themselves into the position of the competent examiner or judge so that they can have in view the legal requirements for obtaining exclusive rights for their clients, the established legal practices and public interests as well.

It follows from the above that patent attorneys can only draw a borderline to be realistically protected between applicants' interests (scope of protection to be as broad as possible) and the entirely contrary public interest (exclusive rights to be as limited as possible) represented by examiners, judges, or the standpoint of parties of opposing interest, if they are ready to compromise to a certain extent. In the event that they are lacking in this **ability to compromise**, the positive outcome of the case is endangered.

Taking a commonly known fact into consideration, namely that inventors are, in the majority of instances, much more sensitive than average, patent attorneys should act particularly **tactfully** in their public relations work.

On the other hand, a certain part of inventors shows distrust towards everyone, which must be eliminated by patent attorneys exerting a **positive psychological influence;** otherwise the required confidential relationship and co-operation cannot be established between them.

Naturally, it cannot be claimed that only those patent attorneys are successful in their practice who originally possess the personality traits and capabilities mentioned above, meaning that they cannot be developed or brought to perfection. The latest results on the research of creativity, for example, prove that intellectual creativity can be learnt and developed to a certain extent.

3. Method For Drawing Up Patent Applications

One of the most important and basic activities in the patent attorneys' work is to draw up the patent specification, claims and drawings.***

3.1. What Order of Preparation Should be Selected?

In practice there are several preparation methods used with different orders for elaborating patent specification with claims and drawings:

According to the first method, patent attorneys prepare the description first and the claims afterwards.

In a second method, it is considered to be proper to follow an inverted order: first the patent claims should be prepared, and then they should be used as a skeleton to build up the description.

According to a third method, the very first thing to complete are the drawings, then the description, and finally, the claims.

This latter method has a fourth version according to which, after the drawings, the claims are prepared, followed by the description as a last phase.

According to a fifth method, the very first step is to formulate the recognition providing a basis for the invention.

Naturally, the above methods can be combined as well. Obviously, one and only true methodological recommendation cannot be provided in this respect, either. In each case, the patent attorney should find or select the most appropriate method in harmony with their individual characteristics and the properties of the given case. Generally we prefer the fourth method.

Whatever order is selected, permanent „feedback" should be maintained during the preparation method since the description of the prior art, the object to be solved by the invention, the general statement of the invention, the detailed description of the embodiments
of the invention and the claims should be in unison with each other, respectively. As a result, the final patent specification is usually produced after multiple modifications.

3.2. Familiarisation with the Invention

Co-operation between the patent attorney and a client is generally initiated in the framework of a legal relationship by the client making available for the patent attorney a description and drawings, if applicable, about his/her invention to be patented. Before or after studying the documents received as well as the relative professional literature, the patent attorney has one or more meetings of discussion with the inventor.

In the course of face-to-face negotiations with the inventor, clarifications should include the state of the art of the technology nearest to the subject matter of the invention, that is, the highest known technical level which can later serve as a basis for comparison, a base for judging (evaluating) the invention.

As inventors generally have thorough knowledge about their own special technical field, they can often provide the patent attorney with publications representing the highest level of the prior art. If there are no such publications, the patent attorney should perform prior patent research since it is an essential prerequisite to evaluate thoroughly the state of the art in the respective technology.

The patent attorney should be thoroughly familiar with the given special field, the closest prior art and the deficiencies of the former, as well as, on the basis of the inventor's account, the direction of the inventor's attempts and the technical solution aiming at eliminating the deficiencies, that is, the invention itself. In the case of inventions of equipment and structure, the invention's ability to operate should be particularly examined, besides the shape and the relative arrangement of structural units.

If, having consulted with the inventor, the patent attorney is still uncertain about his understanding of the invention, the following questions could be raised:

- What is the invention for?
- What is the structural construction and arrangement of the invention and what operational steps does it consist of?
- How does it work?
- Which known solution can be considered to be closest to the invention?
- Which are the most important differences between the closest prior art and the invention, that is, what are the distinctive features of the invention?
- What benefits do these differences have on the invention?
- Why aren't the presented structural or operational difference obvious for a person having ordinary skill in the art?
- What other embodiments, modifications and/or combinations thereof are possible?
- What can be considered as an original recognition (basic idea) of the invention?
- Why do you want to obtain a patent?

On the basis of the answers to the questions above, the patent attorney can duly complement the pool of information available.

This first phase of patent attorneys' work can be named the ,,survey" or „familiarisation" phase.

3.3. Abstraction

In the second phase, the patent attorney's task is to unravel to make out the essence of the invention, that is, to determine the basic consideration of the invention from the pool of information already available.

This activity, requiring abstraction performed by the patent attorney, is often hindered by the fact that the inventor, understandably, can only think in terms of specific embodiments or examples; moreover, he/she is not willing to deviate or to be deviated from them during consultations.

This is the most tormenting phase of the work, when the patent attorney, performing individual, intellectually creative activities, must dissociate from the practical embodiments or examples as explained by the inventor, and must leave out what is inessential and emphasise the essence at the same time by high-level abstraction. It is this phase of abstraction when, luckily, the patent attorney finally gets to the basic consideration of the invention providing a theoretical basis for the patent claims later.

3.4. Reduction - Drafting Claims

Following successful abstraction, the basic consideration of the invention can be moulded into an appropriate technical form, that is, the necessary and satisfactory characteristics of the invention can be determined, resulting in the formulation of the main claim text. This operation can be named as the ,,reduction phase".

Each and every superfluous feature or text in the claim may inevitably narrow the scope of protection applied for, whereby the patent attorney, unintentionally, damages his/her client. On the other hand, if one of the indispensable characteristics required for achieving the invention's technical effect is left out, the mistake may be that the invention described in the patent claim will not be operable.

From among the known characteristics of the invention, only those that are essential to determine indubitably the distinguishing features of the invention to be mentioned in the characterising part of the claim should be mentioned in the preamble of the claim (remark: in Hungary only two-part claim form is accepted).

Perhaps for the sake of comparison, it is worth mentioning how different ways of thinking are required by patent attorneys and design engineers, respectively, for their creative intellectual activities:

Designers first draft all the technically possible versions for the solution of a given technical problem, and then choose the optimum solution - in their opinion -, by technical economical and efficiency analyses.

Patent attorneys, on the other hand, should also take into account all the theoretically possible embodiments or methods of realisation on the ground of the basic consideration of the invention, so thus some analogy can be established between the two types of activities. Later on, however, patent attorneys' activities develop into a completely different direction: after assessing the necessary and sufficient common characteristics of possible versions, they must prepare a main claim in order to define the broadest possible scope of protection to be realistically claimed, which includes all the embodiments and methods of realisation; moreover, in fortunate cases, it even includes further versions not invented up to that point, that is, the ones to be possibly developed within the term of the patent.

Drafting claims is one of the most delicate operations of patent attorneys' work because the sphere of the exclusive right to be obtained with the patent is determined by the patent claims. This provides a considerable task for patent attorneys, in the

solution of which individual aptitudes, special approaches, the ability to concentrate, and excellent capacities of logical combination are important factors.

In the claims it is recommendable to use the most generic technical terms, (so-called collective terms) in harmony with the description (such as „joint element" instead of „screw"). Furthermore, relative expressions (e.g. „small", „long", „far", etc.), negative characteristics (except for „non-magnetic", „non-conductive", „non-wettable", and similar definitions that cannot be determined otherwise) are to be avoided.

In method or process claims, the steps and the relations of procedures are to be listed in chronological order, and the devices applied, the basic and supplementary materials, as well as the environmental conditions are to be specified.

As regards preferred embodiments and methods of execution, it is advisable to set up some sub-claims in case the main claim is ruled out (rejected), for example. Besides the additional feature(s) described in a sub-claim (dependent claim), sub-claims include all the characteristics of the claim referred to and are to be interpreted by reading them together.

3.5. The Description

The function of the description of the invention is to provide sufficient instruction for an average expert in the special field of the invention to realise the invention; it must also provide sufficient support for the invention to be patented; thirdly, it must provide assistance for interpretation of the claims.

The introductory part of the description should include, following the denomination of the special field of the invention, a detailed account of a known solution representing the closest prior art and the problems occurring due to its deficiencies, since the object of the invention is to eliminate them.

This is followed by the object of the invention and/or the definition of the task to be solved by the invention, where the technical task to eliminate the deficiencies of background art is to be specified.

Then, it seems wise to disclose the recognition, if any, serving as a basis for the invention; and when providing a general disclosure of the solution according to the invention, the contents of the main claim and the sub-claims should be elaborated. After this the advantages to be achieved are to be listed in detail.

The next part of the description is represented by a brief list of figures in the case of drawings and the detailed explanation of the invention on the basis of one or more examples or embodiments.

The detailed description of the embodiments should consist of clear and, if possible, shorter sentences. All units or details in the claims should be described in sufficient detail, and be provided with reference characters for ease of reference to the drawings. „Sufficient detail" means providing a technological teaching that is sufficient for a person having ordinary skill in the relevant art to be able to realise the invention

and to fill the content of the scope of protection applied for. However, readers of the patent description should not be overwhelmed by information beyond this limit, so explanations of scientific background and theoretical proofs are not necessary.

Of course, the extent and the minuteness of detail to which the description reaches also depend on the type of invention. In the case of a ,,small" improvement-type invention, known details do not really require explanation; however, in the case of original and new solutions, that is, „pioneer” inventions, it is recommended to describe thoroughly every detail.

It is important to select the appropriate terminology and to use the selected terms subsequently (if possible in concordance with the prior art terminology), and always together with the reference characters (numbers, letters) in the case of drawings. So if a „mixing device" has been mentioned, it cannot be later called a „ mixing worm” or „means for mixing”. This terminology must be in concordance with that of the claims.

If there are several embodiments, the detailed description should begin with the simplest one, followed by increasingly complex ones. Each embodiment should be first described out of service (in a static condition), and then in operation, too. This way the invention can be better and more easily understood, and the patent attorney can avoid missing any of the details required for the operability.

If the invention relates to a procedure, the steps of the procedure must be described in order corresponding to an example for realisation and by specifying the equipment used, the basic and supplementary materials applied, and the technical conditions (e.g. temperature, pressure, period of time, etc.) At least one example should be provided for representing the probability of the result or effect produced by the invention. If a range of values is of utmost importance from the viewpoint of the invention, it is recommendable to support it by at least three examples: the value specified for the first example should correspond to the lowest value in the range, the second example to the highest value in the range, and the third example to about the medium in the range.

The patent description and the claims are interrelated in a particular way. It should be emphasised, however, that it is not allowed in the Hungarian patent practice to interpret the scope of protection in an extensive manner on the basis of the description.

3.6. Drawings

Although it is not compulsory to submit drawings as an appendix to a patent specification, it is expedient to do so in all cases when the subject of the invention can be illustrated. Drawings help explain the invention more quickly and more thoroughly; thus it is an efficient means of communication between technical experts. Moreover, it makes the technical solution easier to understand even for people without any technical background, such as judges in patent litigation cases, especially if the drawings are sufficiently picture-like.

The drawings may consist of a perspective plan, an exploded view, a section, a profile, details of different scale, flow diagrams, charts, etc.. It should be noted that chemical or mathematical formulae and tables should also be treated as drawings if they are not built in the description but are presented on a separate sheet.

When designing the drawings, there are two basic rules to keep in mind:

- they should proceed from the whole towards details;
- everything included in the claims should be illustrated and provided with reference characters on them.

The first figure in the drawings should represent the essence of the invention together with the connecting device or the environment in perspective or in a characteristic view. As regards further figures, the structural units and elements pertaining to the essence of the invention should be represented in sufficient detail. When explaining a way of operation, it is expedient to represent different operational positions of displaced structural parts separately.

In the drawings, only the reference characters mentioned in the detailed description should be utilised. Perspective plans and views can be made even more picture-like by applying shadowing appropriately (as required in the US patent practice).

The details of the drawings not mentioned in the description are not subject to claim of rights in general.

3.7. Abstract

The abstract is prepared in order to provide quick technical information for readers. Consequently, the abstract should include a brief and concise summary of the patent description and a characteristic figure, if any. The abstract is not subject to any claim of rights.

On the basis of the information obtained from the abstract, readers should be able to decide whether it is necessary for them to study the often extensive patent description and drawings.

4. Final Remarks

It may be concluded that, due to the international harmonisation of the patent laws, the requirements of patent applications will also be increasingly standardised all over the world, but drafting a proper patent specification with claims will most probably remain one of the greatest challenges for every patent attorney in his/her highly individual and intellectual practice.

The quality of the patent specification and the possibility for enforcing the exclusive right based on the obtained patent are closely related, and always depend especially on the competent patent attorney. That is why we think that it would be worth looking more frequently behind the ,,scenes", at least in the European patent literature.

It is hoped that the present paper may provide some methodological support to this subject.

Closing motto:

"THOSE WHO KNOW HOW TO DO A THING DO NOT FIND IT DIFFICULT;

THOSE WHO FIND IT DIFFICULT KNOW NOT HOW TO DO IT"

(Chinese proverb)

NOTES:

** This is a revised and completed contribution of the author, based on his paper "Patent Attorney's practice" which was published in Hungarian in the Industrial Property Handbook (Iparjogvédelmi Kézikönyv, Budapest, 1994);*

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**** Reference is made to a scientific analysis of the disclosure of an invention, in the study of Otto Somorjay titled "The Disclosure of an Invention in Case of a Product Patent" (published in Hungarian, MIE-Publications, Vols. 13-15).*

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