Europäisches Patentamt
European Patent Office
Office européen des brevets

Munich, 15 January 2026

MOCK paper M4

A MOCK paper M4 is available for testing and preparation purposes (see annex 1).
For each question the achievable marks are indicated.

A model solution addressing the expected answers for all questions is included in annex 2.

For the Examination Board
The Chairman

Jakob Kofoed

Mock paper M4

Today, 10 March 2027, you receive a letter from Ms Fast:

Dear attorney,

[001] I own the German ski boot manufacturer FASTER (F), where I design and manufacture cross-country ski boots. My main markets are Austria, Germany and Switzerland and my only factory is located in Germany. According to common general knowledge, cross-country ski boot soles (S) are made of polymer foam. Nanoparticles (NP) are particles of less than 100 nanometers (nm) and have generated huge interest in the scientific world. This inspired me to experiment with ski boot soles comprising nanoparticles in the polymer foam.

[002] During my research, I found out that all metal nanoparticles modify the foam structure of a ski boot sole, thereby improving its energy storage. Such ski boot soles return energy to the skier. In particular, I found out that copper nanoparticles of up to 40 nm increase the energy storage of ski boot soles by 200% compared to soles without nanoparticles. Copper is a metal. On 29 January 2026 I filed the European patent application EP-F1 at the EPO in German in the name of FASTER and without claiming priority. EP-F1 describes the effect of increased energy storage and claims a cross-country ski boot sole comprising copper nanoparticles up to 40 nm.

[003] Afterwards, I found out that all metal nanoparticles increase the energy storage of ski boot soles by 40% compared to soles without nanoparticles. If the size of the metal nanoparticles is up to 80 nm, energy storage is increased by 100%. I therefore filed the European patent application EP-F2 at the EPO on 9 March 2026. I filed EP-F2 in German in the name of FASTER and paid the filing fee and the search fee for EP-F2. EP-F2 contains the entire disclosure of EP-F1 and claims priority from EP-F1. EP-F2 describes the effect of increased energy storage, as well as describing and claiming a cross-country ski boot sole comprising metal nanoparticles up to 80 nm (claim 1).

[004] My most recent reasearch involves ski boot soles that comprise silica nanoparticles ranging from 35 nm to 45 nm (sole A). Silica is not a metal. Silica nanoparticles within that size range increase the energy storage of the ski boot soles by 300% compared to soles without nanoparticles. Such soles will give skiers a significant advantage! I have spent the last few months preparing for the mass production of these

soles. I want to start selling ski boots with sole A before the next ski season.
I filed EP-F4 in German which describes and claims ski boot soles comprising silica nanoparticles ranging from 35 nm to 45 nm. I received a communication under Rule 71(3) EPC in August 2026. As I forgot to reply to this communication, I received a notification of loss of rights on 15 January 2027.

[005] My Austrian competitor HIKE (H) is also active in the field of ski boots. HIKE's only factory is located in Austria. Last week, I performed a search on the internet and found an announcement which was published on HIKE's website on 10 February 2027 (announcement A). This announcement stated that HIKE would soon start selling cross-country ski boots with ski boot soles comprising silica nanoparticles ranging from 35 nm to 45 nm. What a shock! These ski boot soles have exactly the same composition as our sole A! In announcement A, HIKE also states that these ski boot soles are protected by HIKE's Austrian patent AT-H. I found out that AT-H was filed in 2023 and published in May 2025, and that the mention of the grant of AT-H was published in January 2026. AT-H is in force and describes and claims a cross-country ski boot sole comprising nanoparticles. AT-H neither specifies the material nor the size of the nanoparticles and does not mention the effect of increased energy storage either.

[006] During my internet search, I also found another announcement on HIKE's website, published on 4 March 2026 (announcement B). In that announcement, HIKE stated that they had bought the European patent application EP-H and that the transfer was registered with the EPO. HIKE further stated that they will soon produce and sell cross-country skiing ski boot soles comprising copper particles ranging from 70 nm to 80 nm (sole B), and that these soles are protected by their patent application EP-H. As mentioned, I also experimented with copper nanoparticles and there is no doubt that copper particles ranging from 70 nm to 80 nm can be mixed into any polymer foam to produce sole B. I have realized that the manufacturing process becomes simple and cheap when the ski boot soles have the composition of sole B. So I am very keen on manufacturing and selling ski boots with sole B!

[007] EP-H was filed at the EPO in Chinese by the Chinese company SNOWMAN in September 2024. EP-H was published in English on 4 March 2026 and was granted without amendments. The mention of the grant of EP-H was published on 3 February 2027. I checked the EP

register and no request for unitary effect has been filed to date. The granted patent EP-H describes and claims a cross-country ski boot sole comprising copper particles ranging from 70 nm to 80 nm. The only material described in EP-H is copper. I had the original Chinese text of the European patent application EP-H translated by a certified translator. The translator alerted me that the English publication of EP-H differs from the Chinese text, even though this is not obvious from the English text. The Chinese text of the patent application only mentions copper particles of from 70 to 80 micrometers (µm), and it does not mention nanometers at all. One micrometer equals 1 000 nm.

[008] By the way, I also filed a European patent application EP-F3 at the EPO in German in the name of FASTER on 12 February 2026 without claiming priority. The description of EP-F3 states that the addition of metal nanoparticles ranging from 35 nm to 80 nm increases the energy storage of ski boot soles and that any metal can be used. EP-F3 claims a cross-country ski boot sole comprising metal nanoparticles ranging from 35 nm to 80 nm. I intentionally never paid any fees for EP-F1 and for EP-F3 because I intended to file EP-F2. I received a notification of the loss of rights for EP-F1 in July 2026, followed by a notification of loss of rights for EP-F3 in August 2026.

I am very upset about the announcements on HIKE's website and urgently need your advice!

Please advise me on the following issues:

1. Outline the patent situation as it currently stands for the claims of FASTER's applications:

(a) EP-F2
(b) EP-F1
(c) EP-F3.
(d) EP-F4

2. As the situation currently stands, are FASTER or HIKE free to produce or sell the following products in Austria, Switzerland or Germany:

(a) cross-country ski boots with sole A
(b) cross-country ski boots with sole B?

3. How can you improve the situation for FASTER?

Possible solution – mock paper M4

1. Outline the patent situation as it currently stands for the claims of FASTER's applications.

(a) EP-F2

EP-F2 is still pending.

EP-F1 is the first filing for Copper (Cu) nanoparticles of up to 40 nm, it was filed by the same applicant and EP-F2 was filed within the priority year.

Claim 1 of EP-F2 enjoys partial priority (G1/15) from EP-F1 for the part directed to copper nanoparticles of up to 40 nm. The remaining part of claim 1, i.e. the part directed to metal nanoparticles from metals other than copper and the part directed to copper nanoparticles larger than 40 nm and up to 80 nm, have the filing date of EP-F2 as the relevant date. For the remaining part of claim 1, announcement B (and the English publication of EP-H) belong to the state of the art under Art. 54(2) EPC. Announcement B (and the English publication of EP-H) disclose (specific) copper nanoparticles from 70 nm to 80 nm, which destroys the novelty of that remaining part. Claim 1 of EP-F2 therefore lacks novelty over announcement B (and EP-H).

Claim 1 of EP-F2 is novel over AT-H, since the specific metal nanoparticles are novel over the generic nanoparticles in AT-H. Claim 1 of EP-F2 also involves an inventive step over AT-H because AT-H does not mention energy storage and does not disclose metal nanoparticles.

(b) EP-F1

The notice of loss of rights was received in July 2026. Further processing is no longer possible for EP-F1. EP-F1 is irretrievably lost.

(c) EP-F3

The notice of loss of rights was received in August 2026. Further processing is no

longer possible for EP-F3. EP-F3 is irretrievably lost.

(d) EP-F4

The notice of loss of rights was received on 15 January 2027. The application is currently deemed withdrawn.

2. As the situation currently stands, are FASTER or HIKE free to produce or sell the following products in Austria, Switzerland or Germany?

(a) Cross-country ski boots with sole A

AT-H is in force. Sole A falls within the scope of protection of AT-H, claiming a cross-country ski boot sole with nanoparticles of unspecified material and unspecified size in Austria. HIKE can prevent FASTER from selling or producing boots with sole A in Austria. In Switzerland and Germany there is no relevant patent and FASTER is free to produce or sell boots with sole A.

In Austria, Germany and Switzerland, HIKE is free to produce or sell boots with sole A.

(b) Cross-country ski boots with sole B

Sole B falls within the scope of protection of granted EP-H in all validated states. Germany and Switzerland are contracting states to the London agreement and have an official language in common with the EPO. No translation of EP-H needs to be supplied in Germany or Switzerland. EP-H is therefore currently in force in Germany and Switzerland. Austria is not a contracting state to the London Agreement. For Austria, a translation of EP-H into German needs to be supplied within 3 months of grant, i.e. by 3 May 2027. It is advisable to monitor the register to be sure that no request for re-establishment of the right to request unitary effect is filed.

In Austria, sole B also falls within the scope of protection of AT-H.

In Austria, Switzerland and Germany, HIKE is free to produce and sell boots with sole B. In Austria, HIKE can prevent FASTER from selling or producing boots with

sole B via AT-H and via EP-H, provided EP-H is validated in Austria. In Germany and Switzerland, HIKE can prevent FASTER from producing and selling shoes with sole B via EP-H.

3. How can you improve the situation for FASTER?

Sole B: “opposition against EP-H”

EP-H was filed in Chinese and translated into English. For EP-H, the Chinese text constitutes the application as filed. The English claim of EP-H is directed to “nanometers” and therefore extends beyond the content of the application EP-H as filed, which discloses “micrometers”.

The mention of the grant of EP-H was published on 3 February 2027. The period for filing an opposition against EP-H runs until 3 November 2027 (Wednesday). File an opposition against EP-H within that period based on the ground for opposition of added subject-matter (under Art. 100(c) EPC).

EP-H will not be maintained in opposition with a claim directed to nanoparticles. Thereafter, sole B will no longer be protected outside Austria.

Sole B: adding priority claim to EP-F2

EP-F3 is the first filing of a boot sole with metal nanoparticles ranging from 35 nm to 80 nm as far as it is not covered by EP-F1. EP-F3 and EP-F2 were filed by the same applicant and the filing dates of EP-F3 and EP-F2 lie within a period of 12 months.

A priority claim to EP-F3 can be added to EP-F2 within 16 months from the earliest priority date claimed, i.e. 12 February 2026 + 16 months = 12 June 2027 (Saturday), carried on to 14 June 2027 (Monday).

Thereafter, the part of claim 1 of EP-F2 directed to “metal nanoparticles from 35 nm to 80 nm”, as far as it is not covered by EP-F1, has the filing date of EP-F3 as the

relevant date.

For that part, announcement B no longer belongs to the state of the art since the filing date of EP-F3 lies before the publication date of announcement B. EP-H only belongs to the state of the art under Art. 54(3) EPC.

The Chinese text of EP-H is “the application as filed” for establishing the content of the prior right. It only discloses “micrometers”. Therefore, claim 1 of EP-F2 is novel.

Claim 1 of EP-F2 involves an inventive step over announcement B, because there is no indication in announcement B to use a metal other than copper, or a particle size of less than 35 nm.

After addition of the priority claim to EP-F3, consider quickly obtaining (provisional) protection, because a boot with sole B falls within the scope of protection of claim 1 of EP-F2. FASTER will then be able to stop HIKE from manufacturing in Austria or selling in Germany, Switzerland and/or Austria boots with sole B based on the patent originating from EP-F2.

After grant, request unitary effect. As we intend to expand our activities into other states participating in the Unitary Patent (UP) such as France, Italy and Sweden, the UP route is less expensive.

Cross-country sole A:

Request further processing of EP-F4 as soon as possible: file a response to the Rule 71(3) EPC communication by filing a translation of the claims in French and English, paying the publication and grant fees and paying the fixed fee for further processing. Once the mention of grant has been published in the European Patent Bulletin, request unitary effect.

As we intend to expand our activities into other states participating in the UP such as France, Italy and Sweden, the UP route is less expensive. FASTER will then be able to stop HIKE from manufacturing or selling boots with sole A, based on the patent originating from EP-F4 (in Germany, Austria and other UP states).

No translation of EP-F4 needs to be supplied in Switzerland because Switzerland is a party the London Agreement. EP-F4 will be in force in Switzerland following grant.

Licensing

A cross-license (at least for Austria) should be negotiated taking into account AT-H, EP-F2 and EP-F4.