

Examiners' Report – Paper A 2008 (Electricity/Mechanics)

1. General considerations

The client describes new developments in the field of letter-weighing devices which use the principle of a lever pivoting about a fulcrum.

The client describes prior art letter-weighing devices with reference to Figs. 1 and 2.

The client describes new letter-weighing devices, for which he wishes to obtain patent protection, with reference to Figs. 3-5. These letter weighing devices comprise receiving means (e.g. a slit) for receiving a letter at different distances from a fulcrum. When the weight of a letter exceeds a threshold value, the letter-weighing device tilts about the fulcrum. The different distances from the fulcrum, which correspond to different lever arms, define different threshold weight values above which the letter-weighing device tilts. The threshold weight values decrease with increasing distance from the fulcrum.

The client seeks patent protection for various alternative letter-weighing devices, which can be divided in two main constructional groups:

Letter-weighing devices of the first constructional group (Figs. 3 and 4) comprise more than one slit, each slit being located at a different distance from the fulcrum and corresponding to a different threshold value. Letter-weighing devices of the second constructional group (Fig. 5) comprise two separate bodies, one of which can slide in and out of the other, and a single slit. By sliding these bodies relative to each other, the slit can be positioned at different distances from the fulcrum.

The client states that all the letter-weighing devices of Figs. 3 to 5 can be made from a blank of foldable material having pre-formed cutting and folding lines. Fig. 6 is an example of such a foldable blank of material.

The prior art letter-weighing device shown in Fig. 1 requires at least one separate exchangeable counter-weight to compare the weight of a letter against different threshold weight values. This device has the disadvantage that the user must carry at least one separate exchangeable counter-weight to compare the weight of a letter to different threshold weight values.

The prior art letter-weighing device shown in Fig. 2 has a sliding counter-weight to vary the threshold value by varying the distance of the counter-weight to the fulcrum. The client considers this prior art letter-weighing device to be expensive.

The letter-weighing devices for which the client seeks protection do not require sliding or separate exchangeable counter-weights, due to the fact that the different threshold values are set by different letter positions relative to the fulcrum.

The client seeks protection for both letter-weighing devices and blanks from which letter-weighing devices can be formed.

A single independent claim directed to a letter-weighing device covering all the client's new letter-weighing devices (Figs 3-5) was expected.

A single independent claim directed to a blank from which all the client's new letter-weighing devices letter-weighing devices can be formed was expected.

This year, the **100 marks** available were distributed as follows:

40 marks for an independent claim to a letter-weighing device;

10 marks for an independent claim to a blank;

35 marks for dependent claims;

15 marks for the description.

2. Independent claims

2.1 Letter-weighing device claim (40 marks)

An example of a good independent letter-weighing device claim comprises the following features:

- (a) A letter-weighing device (10, 20, 30) comprising
- (b) a first part (10a, 30a) provided with a letter receiving means (12a, 12b, 12c, 32) for receiving a letter (B);
- (c) a second part (10b, 30b) configured to act as a counter-weight for the first part (10a, 30a);
- (d) a fulcrum (14a, 24a, 34a), positioned between the receiving means (12a, 12b, 12c, 32) and the second part (10b, 30b), and about which the letter-weighing device (10, 20, 30) is tiltable;
- (e) the letter-weighing device (10, 20, 30) being configured such that a letter (B) is receivable in the letter receiving means at different lever arms.

Remarks concerning feature (a):

The client's letter refers only to a letter-weighing device. Claiming "a weighing device" was marked equally.

Remarks concerning feature (b):

Specifying a "slit" instead of a "letter receiving means" was considered to be an unnecessary limitation. A letter receiving means other than a slit could be used, for example a clip, which is known from the prior art letter-weighing device of Fig. 1.

Remarks concerning feature (c):

Expressions such as "counter-weight means for the letter" or "a body with a fulcrum" could have been used instead of the "second part" defined in the example claim. The feature (c) could also have been defined in terms of the device having a second part configured so that the device is tiltable dependent on a threshold weight value.

Remarks concerning feature (d):

An alternative expression for the fulcrum could have been used, e.g. pivot member. If in a claim the fulcrum was not defined in a structural or functional relation with the other parts of the letter-weighing device, such a claim risked lacking clarity.

Remarks concerning feature (e):

An alternative wording for "different lever arms" could have been used. For example the same concept could have been expressed in terms of "different distances from the fulcrum (14a, 24a, 34a,)". However a wording implying a variable distance between the

receiving means and the fulcrum risked excluding protection for the letter-weighing devices of the first constructional group (Figs. 3 and 4).

A wording such as “the first part/letter receiving means being configured such that a letter is receivable at different lever arms” (instead of “the letter-weighing device being configured...”) risked resulting in a claim which excluded protection for the letter-weighing device of the second constructional group (Fig. 5) for the following reason. In the letter-weighing device shown in Fig. 5, different positions of the first part (body 30a) with respect to the second part (body 30b) are necessary in order to receive a letter at different lever arms. The configuration of the first part alone is therefore not sufficient to define this feature.

2.2 Foldable blank claim (10 marks)

An example of a good claim to a foldable blank comprises the following features:

- (a) a blank of foldable material comprising
- (b) pre-formed cutting and folding lines;
- (c) the blank being configured such that
- (c1) when cut and folded along the pre-formed cutting and folding lines
- (c2) it forms a letter-weighing device (10, 20, 30) according to any of the previous claims.

The claim to the foldable blank can be derived from paragraph [018] of the client's letter.

Remarks concerning features (c1) and (c2):

The claim was expected to define a blank which, when cut and folded (feature c1), would necessarily result in a letter-weighing device for which the client sought protection. The feature c2 achieves this by reference to the claims to a letter-weighing device. Alternatively the feature c2 could have defined all the necessary letter-weighing device features.

2.3 Inferior solutions

Solutions having an independent claim or claims defining a new and inventive letter-weighing device and covering all the letter-weighing devices disclosed in the client's letter, but having gaps in the scope of protection, were considered to be inferior solutions. Up to a total of **30 marks** were available for such a claim or claims.

For example, formulating separate independent claims to cover the client's letter-weighing devices of the first constructional group (Figs. 3 and 4) and the second constructional group (Fig. 5) risked leaving gaps in the scope of protection and therefore being considered an inferior solution. The same was true for answer papers having a single independent letter-weighing device claim within which alternatives were defined.

Many answer papers included a method of manufacturing a blank of material instead of a claim to a blank. Attempting to protect a foldable blank in this way was awarded a maximum of **5 marks**.

If the claim to the method of manufacturing a blank further included any of the steps of cutting, folding and forming the letter-weighing device, no marks were awarded for the claim.

Independent method claims directed to a method of manufacturing a letter-weighing device were not expected and received no marks.

2.4 Unnecessary limitations

Up to a total of **30 marks** for an independent letter-weighing device claim and up to a total of **7 marks** for an independent claim to a foldable blank, were deducted for claims which were unnecessarily limited.

Severe unnecessary limitations in an independent letter-weighing device claim which lead to protection for one of the three new letter-weighing devices described in the client's letter being excluded from the scope of the claims lost **20 marks**. Where protection for more than one of the three new letter-weighing devices described in the client's letter was excluded from the scope of the claims, **30 marks** were lost.

Examples:

limiting to a plurality of slits excludes the letter-weighing device of Fig. 5;

limiting to a sliding body excludes the letter-weighing devices of Figs. 3 and 4;

a wording such as "the receiving means is at a variable distance from the fulcrum" risked excluding the letter-weighing devices of Figs. 3 and 4.

Less severe unnecessary limitations in an independent letter-weighing device claims, such as specifying that a step or feet act as the fulcrum or specifying the shape or material of the letter-weighing device (e.g. triangular section, hollow, foldable material - see paragraphs [013] and [018] of the client's letter) lost up to **12 marks**.

Minor unnecessary limitations, in an independent letter-weighing device claim, such as specifying a slit instead of a letter receiving means, lost up to **6 marks**.

Unnecessary limitations in an independent claim to a foldable blank lost up to **5 marks**.

However where a claim to a foldable blank was only unnecessarily limited due to a reference to an unnecessarily limited claim to a letter-weighing device, then no marks were deducted from the claim to a foldable blank in this category.

2.5 Novelty

A letter-weighing device claim lacking novelty lost **24 marks**.

Letter-weighing device claims which used features which are known from the prior art described by the client (Figs. 1 and 2) as the characterising features, risked lacking novelty with respect to these prior art devices.

For example:

the letter-weighing device being configured such that a lever arm can be varied (this feature is known from the letter-weighing device shown in Fig. 2, since the movable counter-weight of Fig. 2 varies a lever arm);

the counter-weight being fixed (this feature is known from the letter-weighing device of Fig. 1, see par. [006], 3rd sentence);

the letter weighing device being configured to have a variable threshold weight value (this feature is known from the letter-weighing devices of either Fig. 1 or Fig. 2);

the distance between the receiving means and the fulcrum defining a threshold value (this feature is known from both the letter-weighing devices of Figs. 1 and 2).

A claim to a foldable blank which was not novel lost **6 marks**.

2.6 Inventive step

An independent letter-weighing device claim which lacked inventive step lost **20 marks**.

An independent claim to a foldable blank which lacked inventive step lost **5 marks**.

A novel letter-weighing device claim which did not include the feature (e) risked lacking inventive step.

A novel claim to a foldable blank, having no link between the cutting and folding lines and the forming of a letter-weighing device risked lacking inventive step, e.g. where features (c1) and (c2) were missing.

2.7 Clarity

Up to a total of **20 marks** for an independent letter-weighing device claim and up to a total of **5 marks** for an independent claim to a foldable blank, were deducted for claims which lacked clarity.

Up to **20 marks** for the letter-weighing device claim and up to **5 marks** for the claim to a foldable blank were deducted for a severe lack of clarity. For example:

if a claim merely defined a desired result to be achieved;

if it was unclear as to whether protection for one of the three new letter-weighing devices described in the client's letter was excluded from the scope of the claim;

if, due to unclear wording, it could have been argued that the claim lacked novelty.

For less severe cases of lack of clarity, between **4 and 16 marks** were deducted for the letter-weighing device claim and between **1 and 4 marks** were deducted for the claim to a foldable blank. For example, with respect to the independent claim to a letter weighing device:

claims which did not have all the features listed above in the example claim risked lacking clarity because they did not sufficiently define the interaction between the features of the letter-weighing device;

when the position of the fulcrum was not sufficiently defined with respect to the other features, **4 marks** were deducted;

when a letter instead of the receiving means was used to define the different lever arms, **4 marks** were deducted.

It is noted that claims which clearly lacked novelty or inventive step due to broadly defined or omitted feature(s) were marked under those sections and not in the clarity section.

2.8 Formal matters

For the letter-weighing device claim, a two-part form of claim was expected. The two part form should have been constructed to include the features in common with either of the letter-weighing devices of Fig. 1 or Fig. 2 in the pre-characterising part of the claim.

A two-part form claim which was wrongly structured in this respect or a one-part form without clear indication in the description (cf. Guidelines C-III, 2.3b) of the closest prior art and the features known from this prior art led to a deduction of up to **3 marks**.

For the claim to a foldable blank, the two-part form was not expected.

Partially incorrect or very incomplete reference signs in the claims resulted in a deduction of **1 mark**; the total absence of reference signs in the claims resulted in a deduction of **2 marks**.

3. Dependent claims (35 marks)

A maximum of **35 marks** were available for a set of dependent claims. Full marks were only awarded for dependent claim sets having a logical claim structure, wherein the dependent claims had correct back references to define appropriate dependencies and wherein the dependent claims were consistent with the independent claims.

The example set of features for dependent claims given below was considered to be appropriate for the example independent claims. If an answer paper had a different set of independent claims, then the dependent claims could differ from those given below and marks were awarded on a case by case basis.

For example, if an answer paper included an independent claim which lacked an essential feature of the expected claim and was thereby rendered not new or lacking in inventive step, then some marks were awarded for a dependent claim directed to this feature which could later be combined with the independent claim to provide a new and inventive claim.

If however an answer paper included an independent claim which had the features of the corresponding example claim and an additional feature and was thereby rendered unnecessarily limited, then a dependent claim for the additional feature gave the client no advantage and therefore did not receive any marks.

15 marks in total were available in total for claims with the following features:

the first and second parts (10a, 10b) of the letter-weighing device being integrally formed;
the letter-weighing device comprising two separate bodies corresponding to the first and second parts respectively;
the letter-weighing device being made of foldable material.

A further **20 marks** in total were available for developing further aspects of the client's new letter-weighing devices.

The following further features were considered to be useful in developing dependent claims with respect to all the new letter-weighing devices of the client:
letter-weighing device having a triangular cross section;
letter-weighing device being hollow;
the foldable material being cardboard;
the foldable material being a stainless steel sheet.

The following further features were considered to be useful in developing claims with respect to the new letter-weighing devices of the first constructional group (Figs. 3 and 4):

the receiving means comprising a plurality of discrete letter receiving means (12a, 12b, 12c) along the first part (10a) at the different lever arms;
the receiving means being slits;
the letter-weighing device comprising a step between the first part (10a) and the second part (10b) which acts as the fulcrum;

the letter-weighing device comprising (lateral) feet (24a) between the first part (10a) and the second part (10b) which act as the fulcrum.

The following further features were considered to be useful in developing claims with respect to the new letter-weighing devices of the second constructional group (Fig. 5):

the first body can slide in and out of the second body;
the receiving means being a single slit (32);
the first body being provided with a scale (33);
the second body comprising feet (34a) which act as the fulcrum.

A feature defined in a dependent claim of a claim to a letter-weighing device and again in a dependent claim of a claim to a foldable blank was only awarded marks once.

Dependent claims directed to features known per se from the prior art only attracted very few marks.

No marks were awarded for features of dependent claims which if later combined with the independent claim from which they depended, would not provide useful fall-back positions for the client.

For example:

dependent claims defining a feature which was an explicit or implicit feature of an independent claim from which the claim depended;
dependent claims defining trivial features such as specific threshold weight values (20g, 50g, 100g).

4. Separate applications (0 marks)

Separate applications were not expected this year and no marks were available for them.

5. Description (15 marks)

15 marks in total were available for the description. Of these **3 marks** were available for acknowledging the prior art, **10 marks** for a discussion of the problem and its solution with respect to an independent letter-weighing device claim and **2 marks** for a discussion of the problem and its solution with respect to an independent claim to a foldable blank.

Acknowledgment of the prior art (3 marks)

An acknowledgement of either of the letter-weighing devices shown in Figs. 1 and 2 as relevant prior art was expected.

Discussion of the problem with respect to the independent letter-weighing device claim (5 marks)

It was expected to define a problem which was consistent with the prior art acknowledged, for example:

With respect to the letter-weighing device of Fig. 1, the problem (P1) could have been to provide a letter-weighing device with which different threshold weight values can be set without the need for a separate exchangeable counter-weight;

With respect to the letter-weighing device of Fig. 2, the problem (P2) could have been to provide a letter-weighing device which is inexpensive to manufacture.

Discussion of the solution with respect to the independent letter-weighing device claim **(5 marks)**.

It was expected to provide a brief explanation as to why the characterising features of the chosen independent letter-weighing device claim solved the problem defined. For example, with respect to the above example letter-weighing device claim, considering the prior art letter-weighing device of Fig. 1, the characterising portion of the claim would be the feature (e) and the associated problem would be problem (P1). The following discussion could have been used.

In the device according to this solution, because a letter is receivable at different lever arms (i.e. at different distances from the fulcrum), the weight of a letter can be compared to different threshold weight values without the need for a separate exchangeable counter weight.

Discussion of the problem and its solution with respect to an independent claim to a foldable blank (2 marks)

Up to **2 marks** were available for a brief discussion of a problem and its solution with respect to the claim to a foldable blank. This could have been done by reference to the discussion of the problem and its solution discussed with respect to the independent letter-weighing device claim. An additional advantage could be that a blank of foldable material can easily be dispatched by internet mail order.

Paper A (Electricity/Mechanics) 2008 - Schedule of marks

Category	Maximum possible	Marks awarded	
		Marker	Marker
Letter weighing device	40		
Foldable blank	10		
Independent claims	50		
Dependent claims	35		
Description	15		
Total	100		

Sub-Committee for Electricity/Mechanics agrees on marks and recommends the following grade to the Examination Board:

☐ PASS
(50-100)

☐ FAIL
(0-49)
COMPENSABLE FAIL
(45-49, in case the candidate sits
the examination for the first time)

4 July 2008

Chairman of Examination Committee I