

Introduction

The 2025 paper was directed to an apparatus for protecting an optical device from the accumulation of airborne debris using a flow of gas. Three prior art arrangements were illustrated, and the client described a variety of embodiments that they wished to protect. On the whole, the task was handled well with the pass rate being slightly higher than in recent years. Successful candidates recognised the broad concept and framed an appropriate independent claim and a good variety of dependent claims, capturing the features outlined in the mark scheme. The identification of important dependent claim features and the appropriate structuring of a set of dependent claims again seemed to prove challenging to a not insignificant number of candidates.

The mean marks for the sections can be found below the feedback on individual questions.

Task

The invention

The invention described by the client is a protection apparatus for an optical device, such as a video camera, that prevents or reduces the build-up of airborne debris (dust, dirt etc) on that optical device. The main concept is to form a gap between an outer housing and an inner item. The gap acts as a gas (air) channel, with gas introduced via an inlet passing along the channel and exiting from an opening in the outer housing. The inner item (which could be an inner housing for an optical device or the optical device itself) has a transparent window aligned with the opening in the outer housing. The gas enters the gap through the inlet and exits via the opening which aims to keep the transparent window clear of debris.

Main claim

The key task this year was to produce an independent apparatus claim that covered the main embodiments of the apparatus that were described by the client, whilst avoiding the prior art.

The client explicitly stated that they might be selling an outer housing that could be used directly with a third-party optical device that acted as an inner housing (thus avoiding the need for a separate inner housing) and also described apparatus having separate or combined inner and outer housings. As outlined in the mark scheme, fewer marks were available when only the combination of inner and outer housings was claimed. A suitable definition of the gap required for controlling the gas flow before it is directed over the

window and out of the opening was also considered essential for the apparatus claim, as defined in the mark scheme.

Dependent claims

The main challenge was to produce a set of dependent claims that were in a logical order and covered the main features described by the client, as outlined in the mark scheme. Many candidates would likely have benefitted from spending a little more time upfront thinking about the appropriate way to structure the dependent claim set, for example, by ordering the dependent claims to cover the different inner/outer housing options whilst taking account of more specific features that related to only one or a subset of those options.

Most candidates provided dependent claims that covered the protection apparatus in combination with the optical device and with other components that could also be sold as part of a kit. The client made a number of suggestions for such a kit, including for example at the top of page 5 of the paper, wondering if the camera supplier may like to sell the solution “alongside their cameras”. A few candidates provided method claims that extended beyond a mere use of the apparatus. These candidates were awarded accordingly.

Introduction and background

This section was typically handled well. The vast majority of answers included a mention of all the prior art contained in the client’s letter and summarised the problem faced when using such known apparatus.

A small number of candidates omitted one or more of the prior art examples mentioned by the client, which typically resulted in fewer marks being awarded, as there did not seem any reason for not including them when the client has suggested they are relevant. Higher marks also tended to be awarded to candidates explaining in their own words the background to the invention and the problem being addressed, rather than simply copying and pasting text from the client’s letter.

Statements of invention

Many candidates appreciated the importance of explaining and expanding on the independent and dependent claim features in this section and were awarded accordingly. This is especially the case when using functional claim terminology referring to other articles or how a feature can be used.

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FD2 – Drafting of Specifications

As usual, marks were awarded for expressly stating what each claimed feature does and then explaining the advantage(s) of such a feature. The published mark scheme again includes a breakdown of how the twenty marks available for this section may be awarded. A notable number of answers still merely copied the claim language and gave no further details or just listed generic advantages (sometimes repeating the same advantage for multiple dependent claims). Fewer marks could be awarded for such answers.

Specific description

The specific description was generally written well, but more marks were awarded when the text from the client letter was appropriately reworded and reordered rather than being copied verbatim. Inclusion of expanded explanations of variants and alternatives typically gained marks, as outlined in the mark scheme.

The PEB put processes in place to ensure that the error in the reference numerals did not disadvantage any candidates, including amending the mark scheme. This error did not seem to have caused problems for any candidates.

The numbered drawings are provided to avoid candidates having to label drawings during the examination as this can be time consuming. However, it is also perfectly acceptable for candidates to modify the drawings themselves (for example, to use different numbering) if they so wish.

Abstract

Generally, most candidates provided an acceptable abstract and the vast majority included a title and an appropriate reference to one of the figures.

Mean Marks by Section

FD2	Introduction and Description	Claims	Abstract	Total
Marks available	45	50	5	100
Mean mark	25.8	18.1	4.1	48.01