



Examiners' Comments on Candidates' Performance in QE 2007 Paper A

1. The subject matter of this year's invention may be simplest motorized device ever invented and is in common use. Nor is the prior art very similar. So, the task in drafting claim 1 is to express a well-known, simple concept clearly. Few candidates managed this.
2. One difficulty is in finding clear terminology for the various directions. Relative to the axis of rotation, the blades extend radially, are spaced apart angularly (or circumferentially), move circumferentially, and generate an axial air flow. Patent agents must be able to use such terms with precision. If they cannot do so for such a simple machine, how would they cope with something mechanically complex?
3. Many candidates proposed phrases such as "longitudinal symmetry about the axis of the hub" or "the blades move in the same horizontal direction". The first phrase is meaningless. The second, in a narrow reading, excludes the embodiments (e.g. the blades are never, at any moment, moving in the same direction; in the arrangement which generates a horizontal air-flow, their motion is not "horizontal"); in a broad reading, it covers the 2nd prior art device (in which the free ends of the two sheets move along parallel arcs which are horizontal at their lowest point, and nearly horizontal everywhere). Similarly, in the sub-claims surprisingly many candidates stated that the leading edges of the blades, are "parallel to the direction of rotation". They are not. "Clockwise" and "anti-clockwise" are meaningless unless you say which direction you're looking along the axis; anyway, they're irrelevant to the invention. In the 2nd prior art device, the "plurality" of sheets could be said to "rotate" "around" a "hub" (i.e. the parallel hinges) to generate motion which at some moments is "horizontal", so none of these words alone clearly gives novelty to a claim; they certainly don't give inventive step.
4. The examiners were prepared to give almost full marks to a claim 1 which specified clearly that the rotating blades are arranged to generate an axial air flow. That is, a functional definition of the arrangement of the blades. Note, however, that certain patent offices might reject this claim because it defines the blade arrangement by its consequences. Thus, at least in the view of the author of the paper, it would be better to define the blade arrangement geometrically rather than functionally: the blades must have an advancing surface inclined to both the axial and the circumferential directions. Almost no candidates did this.
5. Some candidates tried to distinguish from the prior art simply by saying that "the air flow is substantially constant". This is too functional. In the first place, "substantially" renders the scope of the claim unclear. The second prior art device designedly has more constant air flow than the first; is it "substantially" constant? Conversely, no doubt the client's device is still slightly gusty. In the second place, this claim covers all possible ways of obtaining an obviously

desirable result (note that the “feedback” mentioned by the client his letter is that the first prior art device is irritatingly gusty). For either reason, few patent examiners would allow such a claim.

6. A surprisingly rather high number of candidates included the motor as an element of claim 1 even though it was clearly indicated in the instructions of the client that only the body of the fan was the invention and, in line therewith, the motor is prior art that can be obtained from a third party. Thus, this unnecessary limitation resulted in heavy deduction of marks since it renders enforcement of the patent in Singapore against a competitor that offers the fan body without the motor virtually impossible since one would have to claim contributory infringement (which does not exist in Singapore) or joint-tortfeasorship (which is hard to demonstrate).
7. The summary of the invention carries only a few marks, but those marks which exist are not all awarded for a one line reference to claim 1. Ideally, this section should have a paragraph corresponding to each claim, giving in a few words the advantage flowing from the feature claimed. (This might result in fewer worthless claims being submitted for features which have no advantage, e.g. “clockwise” rotation).
8. On the positive side, the examiners were pleased that few candidates claimed “at least 3” blades, “spokes”, or “longitudinally-symmetric” blades as an element of claim 1. Thankfully, almost no candidates alleged that there was a lack of unity, and few proposed method claims.