

OPINION UNDER SECTION 74A

Patent	EP 2164786 B1
Proprietor(s)	Formetco, Inc.
Exclusive Licensee	
Requester	Urban Storm Management Ltd
Observer(s)	
Date Opinion issued	26 August 2016

The Request

1. The comptroller has been requested to issue an opinion as to whether the products described and illustrated in the request would infringe EP 2164786 (the Patent).
2. No observations have been filed in relation to this request.
3. The Patent was granted on 25 December 2013 designating GB and remains in force in the UK. It was originally published as WO 2009/012318 A1.
4. Two potentially infringing products are described and illustrated in the request, the Historic Product (Annex 2) and the Current Product (Annexes 3 and 4). They are both cable tensioning apparatus for tensioning cables used to apply an even tension to large vinyl sheets supported in a frame used, for example, as billboards.

The Patent

5. The Patent relates to a system for tensioning a sheet attached to a frame, e.g. a billboard, and in particular to the form of the cable tensioning device.
6. The system as a whole may be best understood by reference to figure 2 of the Patent reproduced as figure 1 below.

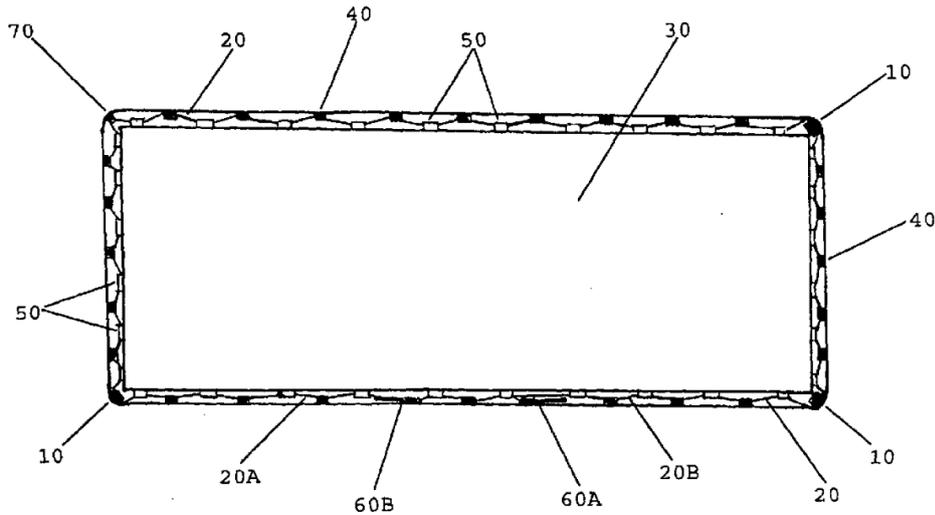


Fig. 2

Figure 1 - Figure 2 of the Patent showing the general arrangement of the tensioning apparatus

7. The apparatus comprises a sheet (30) which is to be tensioned by means of clips or gripping means (50) attached around the periphery of the sheet. A cable (20) is provided which connects to the clips (50) and to the frame (10) by means of cable guides (40). As the cable is tensioned the clips are pulled tight towards the frame thereby tensioning the sheet. The cable is tensioned by means of one or more cable tensioning devices (60A, 60B) and it is the cable tensioning device which is of particular relevance to this opinion. It is illustrated in figure 11 of the Patent reproduced as figure 2 below.

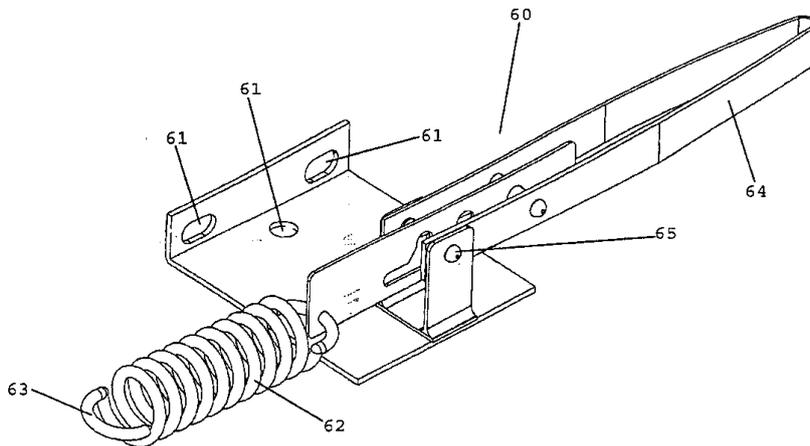


FIG. 11

Figure 2 - Figure 11 of the Patent showing the cable tensioning device

8. The cable tensioning device comprises a spring (62) and a lever (64) which rotates about a pivot point (65). One end of the spring (63) is attached to the end of the cable and the other end is attached to the lever. The description (column 8, lines 14 to 16) specifies that:

As lever 64 is rotated around pivot point 65, it can act to extend spring 62 beyond its equilibrium length, thus creating tension on cable 20 attached to

free end 63.

9. Whilst the principle of operation is clear, it is not readily apparent how this would work in relation to the embodiment of figure 11 which appears to show the mounting plate interfering with rotation of the lever about the pivot point. Nevertheless it is considered that the skilled person would be able to work the invention and this issue does not have any bearing on the opinion.

Infringement

10. Section 60 Patents Act 1977 governs what constitutes infringement of a patent; Section 60(1) reads:

Subject to the provision of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say -

(a) where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;

(b) where the invention is a process, he uses the process or he offers it for use in the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;

(c) where the invention is a process, he disposes of, offers to dispose of, uses or imports any product obtained directly by means of that process or keeps any such product whether for disposal or otherwise.

11. In order to decide whether there is any infringement of the Patent I must first determine whether the products of the request have all the features set out in the claims of the Patent.

The claims

12. Claim 1 of the Patent reads as follows:

1. A cable tensioning system for mounting a substantially flat medium (30) to a frame, comprising:

- a) a single cable (20) having a first end and a second end, the cable being secured at the first end to a point on the frame;

- b) a plurality of cable guides (40) being situated at intervals around the perimeter of the frame, each of the cable guides having a guide channel adapted to receive the cable therein;

- c) a plurality of locking clips (50), each clip including a base plate (51) and a top plate (52) and being adapted to secure an edge of a substantially flat medium between the base plate and the top plate, the top plate having a top surface and a bottom surface and a guide channel (55) formed between the top surface and a lip protruding therefrom, and adapted to receive the cable therein; and

- d) a cable tensioning device (60) including a spring (62), a first end of the spring (62) being adapted to receive the second end of the cable (20) and a second end of the spring being attached to a lever (64) travelling around a pivot point (65) so that when the lever is deployed the spring is extended beyond its equilibrium length so as to apply uniform lateral tension on the cable around the perimeter of the frame.
13. The requester makes clear in the request that, whilst they do not admit to the presence or absence of any of the features in parts (a), (b) and (c) of the claim, they are content for the issue to be decided on the basis of the features of part (d) of the claim. Therefore, for the purposes of this opinion I shall assume that features (a) to (c) are all present in the products and infringement will be based on the presence or absence of the features of part (d) of the claim only. Accordingly, issues of construction can be restricted to that part of the claim.
14. Claim 7 refers to a billboard system comprising a cable tensioning system as claimed in any of the preceding claims. Claim 11 is directed to a method for mounting a substantially flat medium to a frame including the step of providing a cable tensioning system according to any one of claims 1 to 6. Claims 2 to 6 and 8 to 10 are dependent on claims 1 and 7 respectively. All the claims therefore require the apparatus of claim 1 such that, in the first instance I only need to consider claim 1 and only if I find claim 1 infringed do I need to consider the other claims.

Claim Construction

15. The claims must be construed purposively following the well known House of Lords authority on claim construction *Kirin-Amgen v Hoechst Marion Roussel and others*¹. This requires that I put a purposive construction on the claims, interpreting them in the light of the description and drawings as instructed by Section 125(1) and take account of the Protocol to Article 69 of the EPC. Simply put, I must decide what a person skilled in the art would have understood the patentee to have used the language of the claim to mean.
16. Section 125(1) of the Act states:

For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.

17. The Protocol on the Interpretation of Article 69 of the EPC (which corresponds to section 125(1)) states:

Article 69 should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the

¹ *Kirin-Amgen v Hoechst Marion Roussel and others* [2005] RPC 9.

description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Neither should it be interpreted in the sense that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patentee has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of certainty for third parties.

18. In general terms I do not see any particular problems with the construction of the claims and they may be largely construed as read, save that the precise scope of some of the terms may need further consideration.

The Current Product

19. I shall deal firstly with the Current Product. It is illustrated in Annexes 3 and 4 of the request, the most relevant drawings being reproduced as figures 3 and 4 below.

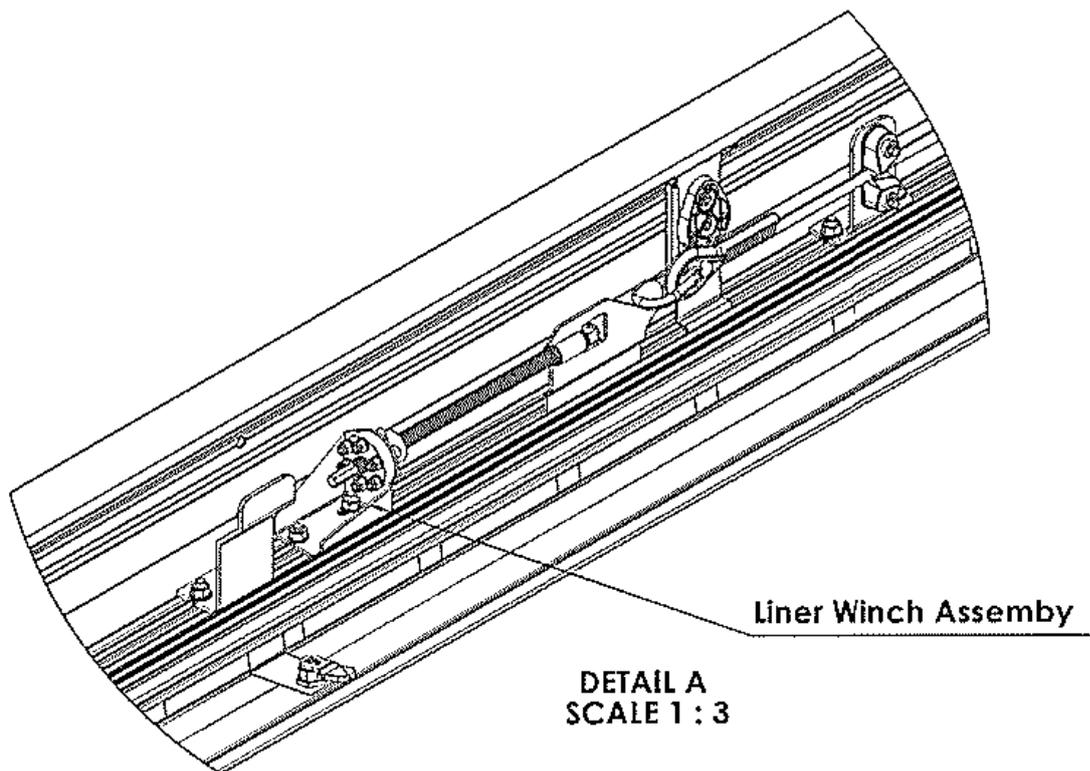


Figure 3 - The Current Product as illustrated in Annex 3 of the request

ITEM NO.	PartNo	DESCRIPTION	QTY.
1	002-XXX-001-001-04	Winch Bracket	1
2	002-XXX-001-001-06	Liner Winch Shaft	1
3	002-XXX-001-001-05	Tr14x3 Bronze Nut	1
4	002-XXX-001-001-08	10mm ID O/lite Bush	2
5		M6 LOCKING NUT STAINLESS STEEL	6
6		M6 x 25 SOCKET HEAD BOLT STAINLESS STEEL	6
7		M8 LOCK NUT STAINLESS STEEL	1
8		6MM ID WASHER STAINLESS STEEL	6
9		8MM ID WASHER STAINLESS STEEL	4
10		M8 x 20 BOLT STAINLESS STEEL	2
11	002-XXX-001-001-01	Hook Plate	1
12	002-XXX-001-001-07	Bush Holder	1
13		M8 NUT STAINLESS STEEL	2
14		ROLL PIN ISO 8748-3x20-ST	1

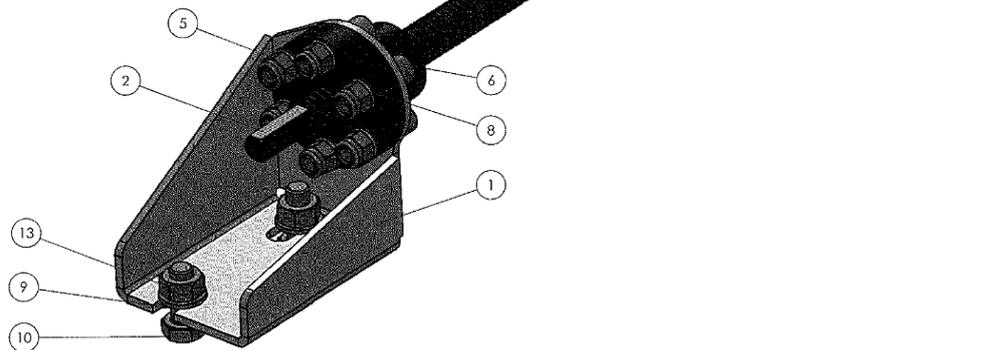


Figure 4 - The Current Product as illustrated in Annex 3 of the request

20. The essential elements of the cable tensioning device of the Current Product are a hook plate (11), to which an end of the cable is attached, a threaded bar with a hexagonal end (2) and a bracket (1) for mounting the arrangement to a frame, the hook plate and the bracket being connected by the threaded bar. The hexagonal end of the threaded bar is turned by means of a portable battery powered drill/driver. Rotation of the threaded bar causes the hook plate to move towards or away from the bracket depending on the direction of rotation, allowing the cable to be tensioned or loosened respectively.
21. As specified in the request and as evident from the drawings, the Current Product lacks a spring and lever. Furthermore, there are not any parts which may be considered to be equivalent. As part (d) of claim 1 requires both these features and the Current Product lacks them, then it does not fall within the scope of the claim. Accordingly any actions in relation to the Current Product do not constitute infringement of the Patent.

The Historic Product

22. The Historic Product is illustrated in Annex 2, reproduced as figure 5 below.

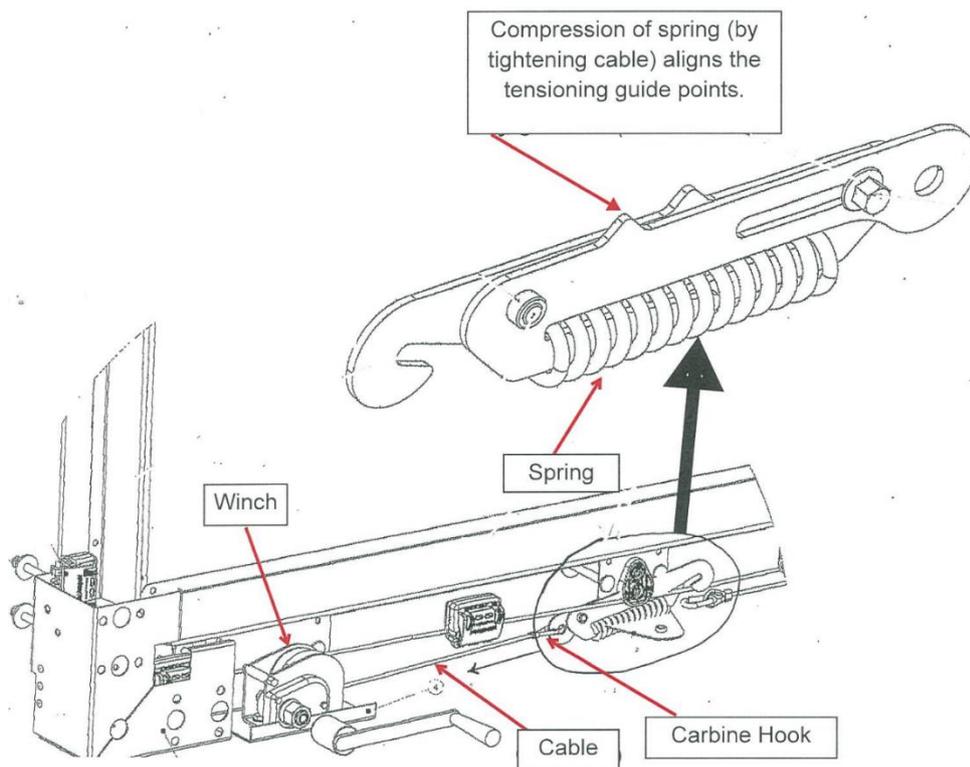


Figure 5 - The Historic Product as illustrated in Annex 2

23. The Historic Product comprises a conventional winch with a removable handle, the winch operating on a winch cable which is attached to one end of a tensioning guide. The other end of the tensioning guide is attached to an end of the sheet tensioning cable. The cable annotated in figure 5 above is in fact the winch cable and not the sheet tensioning cable which is attached to other side of the tensioning guide. It is the latter cable which is the relevant cable for the claims. The tensioning guide comprises a spring which is adapted to be compressed as the winch is operated to tighten the cables.
24. The Patent shows only a simple coil spring, but the claim is not explicitly limited to such a spring. The requester acknowledges that the Historic Product includes a spring but further states that the spring is compressed rather than extended, as required by the claim, and that it is not attached to the cable. Both of these assertions appear to be based on the spring of the claim being the coil spring of the Historic Product.
25. I believe the skilled person would understand that the coil spring illustrated in the embodiments of the Patent could be replaced by other springs capable of extension which would fall within the scope of the claim. Furthermore there may be other equivalents which could also be interpreted as springs for the purpose of claim 1. In this situation it is appropriate to consider the Improver/Protocol questions.
26. The Improver/Protocol questions were set out by Hoffmann J in *Improver v Remington*², and subsequently referred to as “the Protocol questions” by the Court of Appeal in *Wheatley v Drillsafe*³. The questions were set out as follows:

² *Improver Corp v Remington Consumer Product Ltd* [1990] FSR 181

³ *Wheatley (Davina) v Drillsafe Ltd* [2001] RPC 7

“If the issue was whether a feature embodied in an alleged infringement which fell outside the primary, literal or acontextual meaning of a descriptive word or phrase in the claim (‘a variant’) was nevertheless within its language as properly interpreted, the court should ask itself the following three questions:

- (1) Does the variant have a material effect upon the way the invention works? If yes, the variant is outside the claim. If no-*
- (2) Would this (i.e. that the variant had no material affect) have been obvious at the date of publication of the patent to a reader skilled in the art. If no, the variant is outside the claim. If yes-*
- (3) Would the reader skilled in the art nevertheless have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention. If yes, the variant is outside the claim.*

On the other hand, a negative answer to the last question would lead to the conclusion that the patentee was intending the word or phrase to have not a literal but a figurative meaning (the figure being a form of synecdoche or metonymy) denoting a class of things which included the variant and the literal meaning, the latter being perhaps the most perfect, best-known or striking example of the class.”

27. In answering the first two questions I consider that the cable tensioning guide of the Historic Product works, for the purpose of the invention of the Patent, in the same way as the coil spring illustrated in the embodiments. In particular, the guide is extendable beyond an equilibrium position to exert a tension on a cable attached to one end. As such the answer to the first question is no, the variant has no material effect on the way the invention works, and the answer to the second question is yes as it would have been obvious that the variant has no material effect.
28. Whilst the requester states that the cable tensioning guide performs a different function to the spring of the invention, namely to calibrate the tension, I consider that this function is in addition to tensioning the cable.
29. In relation to the third question, the claim simply specifies a spring, the only additional requirement being that the spring is extendable. As such it is considered to be a fairly vague term potentially encompassing a variety of alternatives. Accordingly I do not consider that the skilled person would have understood that a strict compliance to a simple spring was required and that spring mechanisms or spring means would fall within the scope of this term. The answer to the third question is therefore no.
30. On the basis of the Improver/Protocol questions I consider that the cable tensioning guide of the Historic Product is a spring for the purposes of the claims. Furthermore, I consider that the first end of the spring so defined is adapted to receive the second end of the cable and that the spring is extended beyond its equilibrium length to apply uniform lateral tension on the cable around the perimeter of the frame as required by claim 1.
31. However, in order to fall within the scope of the claim the cable tensioning apparatus

must also comprise a lever travelling around a pivot point which can be deployed to extend the spring, the second end of the spring being attached to the lever.

32. The winch handle of the Historic Product may be considered to be a lever travelling around a pivot point. It is noted however that, as illustrated, the pivot point is offset from the main winch drum to which the winch cable is attached. This being the case, the winch illustrated is presumed to be of the type in which the handle rotates a pinion gear which drives the drum via a drum gear. In order to fall within the scope of claim 1, the second end of the spring, i.e. the cable tensioning guide, needs to be attached to the lever, i.e. the winch handle. Whilst the winch handle is not attached directly to the cable tensioning guide, I need to nevertheless consider whether the arrangement falls within the scope of the claim.
33. In relation to the Improver/Protocol questions for this aspect of the claim and whether the winch arrangement is equivalent to the lever, I consider it sufficient to limit detailed consideration to the third question, and presume that the first two questions are answered no and yes respectively. In particular, would the requirement that the second end of the spring is attached to the lever be interpreted by the skilled person as requiring strict compliance?
34. Looking at figure 11 of the patent (figure 2 above), it can be seen that the end of the spring is attached directly to the lever and the lever acts directly on the spring. I consider that the skilled person would understand that the spring does not have to be directly connected in this way in order for the lever to be considered to be attached to the spring as required by the claim. For example, the end of the spring may be attached to the lever by a length of cable and this would still meet the requirements of this part of the claim. Similarly, I consider that a spring attached to a drum operated directly by a lever would also meet the requirement of the claim and this would also be true if the spring were attached to a cable attached to such a drum. So at least in this respect strict compliance is not required. However, it seems that there must be some point at which the lever and spring are disconnected from one another to such an extent that they are not attached for the purposes of the claim, even when strict compliance with this term is not required.
35. In my view, the lever may be considered to be attached to the spring for the purposes of the claim if action of the lever translates directly into action of the spring, even if they are not directly attached. In other words, movement of the lever at the attachment point causes a corresponding and equal movement of the spring. Hence, I consider that where the lever acts on the cable via gears, then the arrangement no longer falls within the scope of this aspect of the claim, the lever not acting directly on the spring. Such an arrangement corresponds to the Historic Product as illustrated in the request, in which the lever drives the drum via one or more gears and, on this basis, it does not include a spring attached to a lever as required by claim 1.
36. I therefore conclude that, as the Historic product lacks one of the required features of part (d) of claim 1, it does not fall within the scope of the claim and it cannot therefore form the basis of any infringing action.
37. As neither the Historic Product nor the Current Product fall within the scope of claim 1, I do not need to consider any of the remaining claims.

Opinion

38. It is my opinion that the Current Product as specified and illustrated in the request does not fall within the scope of the claims. Accordingly any relevant acts in relation to it do not constitute infringement of EP 2164786.
39. Similarly, it is my opinion that the Historic Product as specified and illustrated in the request, and in particular having the type of winch illustrated, also does not fall within the scope of the claims. Relevant acts in relation to it also do not constitute infringement of EP 2164786.

Application for review

40. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

Matthew Jefferson
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.