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1. A violin mute for use with a violin, wherein a tailpiece of the violin temporarily or permanently comprises a magnet counterpart, wherein the violin mute comprises:

a clamping portion (7);

antirotation legs (8a, 8b) configured to extending down on either side of the two middle strings of the violin;

a central leg (10) configured to extending under the strings, thereby preventing the mute from coming loose and acting as a guide as the mute is moved between a rest position and a working position;

two downwardly and outwardly extending channels (9) for the strings between the anti-rotation legs (8) and the central leg (10), configured to providing unrestricted movement of the mute between the rest position and the working position;

and a retaining means (6) constituted by an inbuilt magnet (6) in the mute, the retaining means (6) configured to holding the mute against the end of the tailpiece when not in use.

2. A mute according to claim 1, having a further leg (4) on the side of the mute remote from the tailpiece, forming a channel (7) for application of the mute to the violin bridge.

3. A mute according to claim 2, wherein the further leg is narrower than the distance between a respective base of each of the two channels (9).

~~3. A mute according to claim 1 or 2, wherein the retaining means is constituted by an inbuilt magnet (6) in the mute.~~

4. A mute according to claim 1 and being made of moulded rubber or plastics material.

5. A mute according to claim 1 and having a circular outline, with the channels (9) being approximately radial.

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6. A mute according to claim 1, wherein the central leg (10) comprises a flared foot.

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7. A magnet counterpart for attachment to a violin tailpiece, and for holding a magnetic violin mute in position, the magnet counterpart comprising:
a body at least partly formed of steel, and
attachment means for attaching the magnet counterpart to the violin tailpiece.

8. A magnet counterpart according to claim 7, wherein the attachment means comprises flexible toothed jaws (15) configured to attach the magnet counterpart to the tailpiece.

9. A magnet counterpart according to claim 7 or 8, wherein the body comprises a steel-core.

10. A magnet counterpart according to claim 7, 8, or 9 wherein the body comprises a flexible PVC coating.

11. A violin tailpiece comprising an integrated magnet counterpart for holding a magnetic violin mute in position.

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12. A kit comprising the violin mute of any of claims 1 to 6 and the magnetic counterpart of claims 7 to 10, or the violin tailpiece of claim 11.

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CLAIMS

1. A violin mute for use with a violin, wherein a tailpiece of the violin temporarily or permanently comprises a magnet counterpart, wherein the violin mute comprises:

a clamping portion (7);

antirotation legs (8a, 8b) configured to extend down on either side of two middle strings of the violin;

a central leg (10) configured to extend under the strings, thereby preventing the mute from coming loose and acting as a guide as the mute is moved between a rest position and a working position;

two downwardly and outwardly extending channels (9) for the strings between the anti-rotation legs (8) and the central leg (10), configured to provide unrestricted movement of the mute between the rest position and the working position;

and a retaining means (6) constituted by an inbuilt magnet (6) in the mute, the retaining means (6) configured to hold the mute against the end of the tailpiece when not in use.

2. A mute according to claim 1, having a further leg (4) on the side of the mute remote from the tailpiece, forming a channel (7) for application of the mute to the violin bridge.

3. A mute according to claim 2, wherein the further leg is narrower than the distance between a respective base of each of the two channels (9).

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4. A mute according to claim 1 and being made of moulded rubber or plastics material.
5. A mute according to claim 1 and having a circular outline, with the channels (9) being approximately radial.
6. A mute according to claim 1, wherein the central leg (10) comprises a flared foot.
7. A magnet counterpart for attachment to a violin tailpiece, and for holding a magnetic violin mute in position, the magnet counterpart comprising:
 - a body at least partly formed of steel, and
 - attachment means for attaching the magnet counterpart to the violin tailpiece.
8. A magnet counterpart according to claim 7, wherein the attachment means comprises flexible toothed jaws (15) configured to attach the magnet counterpart to the tailpiece.
9. A magnet counterpart according to claim 7 or 8, wherein the body comprises a steel-core.
10. A magnet counterpart according to claim 7, 8, or 9 wherein the body comprises a flexible PVC coating.
11. A violin tailpiece comprising an integrated magnet counterpart for holding a magnetic violin mute in position.

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12. A kit comprising the violin mute of any of claims 1 to 6 and the magnetic counterpart of claims 7 to 10, or the violin tailpiece of claim 11.

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Response

In response to the examination report, I provide an amended set of claims in both clean and marked forms.

Claim Amendments

Claim 1 has been amended to clarify that the violin mute is “for use with a violin, wherein a tailpiece of the violin temporarily or permanently comprises a magnet counterpart”. Basis for this amendment is provided at page 7, lines 21 to 25, page 8, lines 23 to 24, and page 8, lines 27 to 30.

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Claim 1 has accordingly been amended to refer to the violin components (i.e. strings, violin, tailpiece) as components outside the scope of the claim. This has been achieved by replacing the active language of the claim with “configured to” language, without introducing subject matter.

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Claim 1 has been amended to recite that the retaining means is “constituted by an inbuilt magnet in the mute”. Basis for this amendment is provided by claim 3.

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Claim 3 has been deleted, and the following claims have been introduced.

New claim 3 has been introduced. New claim 3 recites that the “narrower than the distance between a respective base of each of the two channels”. Basis is provided at page 7, lines 10 to 14.

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New claim 6 has been introduced and states that the central leg (10) comprises a flared foot. Basis is provided at page 5, lines 30 to 32.

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New claim 7 is an independent claim and provides a magnet counterpart for attachment to a violin tailpiece. Basis is provided by page 7, lines 24 to 25, as well as page 7, lines 31 onwards.

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New claim 8 states that the attachment means comprises flexible toothed jaws (15) configured to attach the magnet counterpart to the tailpiece. Basis is provided at page 8, lines 1 to 2.

New claims 8 and 9 provide counterparts to the mute of claim 1 and each provides a solution to the same problem of how to use a mute having a magnetic retaining means with an existing violin. As such, these claims are unified and are also permitted as alternate solutions.

✓

New claim 9 states that the body comprises a steel-core. Basis is provided at page 7, lines 32 to 33.

New claim 10 states that the body comprises a flexible PVC coating. Basis is provided at page 7, line 34.

New claim 11 is an independent claim and provides a tailpiece comprising an integrated magnet counterpart for holding a magnetic violin mute in position. Basis is provided at page 8, lines 27 to 30.

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New claim 12 is an independent kit claim including the components used to form the magnetic retaining system.

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Clarity

The Examiner's objections under points 5 and 6 have been addressed.

Claim 1 now refers to the violin only insofar as the mute is configured to be used with the violin.

The violin itself is now clearly an entity outside the scope of the claim, such that only the mute itself is claimed.

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Further, it is made clear that the violin mute of claim 3 (the features of which are now comprised in amended claim 1), is to be used with a violin comprising a magnet counterpart in its tailpiece.

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In view of these amendments, amended claim 1 is not unclear.

Novelty

The Examiner has acknowledged that as-filed claim 3 is novel over the cited prior art. Since the features of as-filed claim 3 are included in amended claim 1, amended claim 1 must also be novel over the cited prior art.

However, briefly, I note that amended claim 1 requires that the retaining means of the violin mute is constituted by an inbuilt magnet.

In contrast, D1 provides a retaining means which uses an elastic cord to retain the mute (see page 11, line 6). This elastic cord cannot be considered an inbuilt magnet.

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D2 does not provide a retaining means whatsoever, since it does not comprises any means to hold the mute against the end of the tailpiece. D2 certainly does not disclose any form of magnet.

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D3 does disclose a magnet, however it is not a violin mute in the slightest; it is instead a pencil holder.

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Accordingly, amended claim 1 must be novel over the cited prior art.

With respect to the remaining independent claims, none of D1 to D3 provides a magnet counterpart for fixing to a tailpiece, or a tailpiece already comprising such a magnet counterpart, since none even discloses use of a magnet in conjunction with a violin. Accordingly, these claims must also be novel.

Inventive Step

The violin mute of amended claim 1 involves an inventive step in view of the cited prior art.

Firstly, the person skilled in the art (skilled person) is a designer of violins and violin accessories. Their common general knowledge includes how violin mutes work (as described at page 4, line 8 to page 5, line 12), as well as round-type mutes lacking a retaining means, such as those disclosed by D2.

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The inventive concept of the violin mute of amended claim 1 is a magnetic retaining means which quietly retains the mute at the tailpiece when not in use, and which, when in use, exerts no force on the bridge of the violin. By exerting no force on the bridge, the present mute is further advantageous in that it is unlikely to spring off unexpectedly.

This inventive concept differs from that mute provided by D1 at least in that the mute of D1 uses an elastic retaining means, rather than one constituting an inbuilt magnet, as required by amended claim 1. Accordingly, the mute of D1 fails to achieve the quiet-usage advantages of the inventive mute and also applies force on the bridge of the violin when in use.

The skilled person would not have found it obvious to introduce such a magnetic retaining means when starting from D1 and having their common general knowledge.

This is because D1 itself does not suggest that a magnet can be used as a retaining means, and nor does the common general knowledge (which comprises only mutes lacking a retaining means altogether).

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Further to this, even if the skilled person were prompted to use a magnet on the mute (which they would not be), since violin tailpieces are generally wooden (as mentioned by the Examiner), they would not include such a magnet since it would be pointless without providing a suitable tailpiece or magnet counterpart (for which there is also no teaching).

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Even further than this, there is no logical place to install a magnet on the mute of D1, since it provides a raised boss 8 (see page 11, line 27) at the location where the magnet would most likely need to be installed. Without teaching that the boss should be replaced by the magnet, the skilled person would not even be able to make use of a magnet (if even prompted to).

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Lastly, even if the skilled person turned to D2, this document does not suggest a magnet, or even any retaining means, should be used, as established above. The skilled person would not have turned to D3, which is in the entirely unrelated field of pencil holders (even if they are suitable for use during a performance or rehearsal, they would not be known to the skilled person who is a designer of violins, and therefore does not perform or rehearse). However, even if they had turned to D3, the document does nothing to suggest that a magnet could be used as a retaining means for a violin mute, or that a tailpiece comprising a magnet counterpart would also be needed; indeed, D3 merely mentions that a magnet can be used to attach a pencil holder to a metal stand, a fridge, cupboard, or lamp, but not any aspect of a violin.

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With respect to D2, the inventive concept differs both in the use of a retaining means and in that the retaining means comprises an inbuilt magnet.

When starting from D2, the skilled person would not have found it obvious to introduce such a retaining means or magnet, even in view of their common general knowledge. As has been established, the common general knowledge is silent as to violin mutes comprising retaining means and certainly does not suggest that a magnet should be used as a retaining means.

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Further, even if the skilled person had looked to D1, D1 also does not suggest that a magnet should be used, such that the skilled person would not have found it obvious to introduce a magnet as a retaining means.

Lastly, as established, D3 does not provide a violin mute, and therefore cannot teach a retaining means or a magnet.

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Finally, the skilled person would not have even considered starting from D3, which does not relate to a violin mute, but instead a pencil holder, which is generally incompatible as a violin mute. For instance, the pencil holder does not provide any means allowing it to be introduced over a violin string, since the hole passing through the holder appears to have a continuous boundary; the pencil holder provides no anti-rotation means such that it would clash with adjacent strings; and the magnet appears to be located in a direction normal to the string, such that it would not be able to engage a tailpiece of the violin.

However, even if they had started from D3, despite the significant differences apparent, there is no teaching in the common general knowledge, or even D1 and D2, on how to modify a pencil holder to function as a violin mute.

Finally, even if such teaching existed (which it does not) the skilled person would not have attempted to modify it so as to be a violin mute, since this would have entirely changed the purpose of the object, and likely rendered it useless as a pencil holder.

In view of the above comments, it is clear that the violin mute of amended claim 1 must involve an inventive step with respect to D1 to D3.

The remaining independent claims must also involve an inventive step with respect to D1 to D3. This is because each of D1 to D3, as well as the common general knowledge, is entirely silent with respect to the use of magnet counterparts configured to attach to violin tailpieces, or even tailpieces comprising such counterparts.

Accordingly, the subject-matter of the amended claims is novel and involves an inventive step with respect to the cited prior art.

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Conclusion

I believe that the objections raised in the communication have been addressed, and I look forward to receiving a communication under s18(4) in due course.

Yours Faithfully,

Mr Bottomley

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Memo

There is plenty of time to respond, as we have just over a month to do so, and can also extend by two months as-of-right, if necessary to do so.

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The compliance period does not expire until mid-2021 at the latest, so we also have plenty of time to get the application in order for grant, and to file a divisional application, if desired (see below).

For this response, I propose responding based on the mute having an in-built magnet which, as you say, provides advantages over D1 and D2.

I have also considered a number of alternative amendments as follows:

- Use of a tacky pad to retain the mute (basis at page 8, line 26); this is disadvantageous as you say, due to loss of adhesion. Further, if the pad were to be attached to the tailpiece, it doesn't distinguish the prior art and, arguably, the felt pad used by D1 could also be considered a "tacky pad", since it adheres to the tailpiece (page 12, lines 10 to 11). Further, regardless of whether it is attached to tailpiece or mute, it would be easy to avoid infringing the claim, since tacky pads could be bought separately and applied to existing mute or tailpieces.
- The mute having a circular outline (basis at claim 5); amendment discarded as D2 does indeed provide a circular outline, and the application does not specify any particular advantage of such an outline. Further, you mention circular mutes like those provided by D2 are "well-known" thus likely forming part of the common general knowledge, and that it is an economical shape, thus providing motivation for the skilled person to use such a shape.
- The further clamping leg being narrower than the channels (basis at page 7, lines 10 to 14); this amendment does provide an advantage that the mute is easier to apply. However, it is arguable that both of D1 and D2 provide a clamping leg narrower than their respective two channels, even if they do then provide additional clamping legs to either side of the central clamping leg. In view of this, I dismissed the amendment, although I have introduced it as a dependent claim.
- The central leg having a flared foot; while this is presented as advantageous, both of D1 and D2 can be argued to provide a flared foot in their respective designs.

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I have introduced a number of independent and dependent claims to enhance the scope of protection and provide further fallback positions. Chiefly, I have introduced a claim to the magnet counterpart, as well as to a tailpiece comprising a magnet counterpart; while these introduce multiple independent claims, it is likely allowable given that they both solve the same problem. I have also introduced a kit claim to protect the combination of mute and counterpart/tailpiece.

With respect to the single string version, you will need to provide further information as to its operation in order to decide how best to protect it. While D2 does briefly mention use on or more strings, it does not provide a working example of this and is therefore unlikely to be considered an enabling disclosure of such a mute. Therefore, it may be possible to file a new application, covering such an idea, regardless of whether it includes a magnet (for instance, preventing rotation of the mute while secured to only one string may be an invention in itself). We could perform a prior art search to see if any other disclosures of such a mute have been made.

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If use of the magnet remains key to the one string mute, it'd be best to file a divisional application, since the use of magnet retaining means are now known through publication of this application. However, basis is not strong for such a claim and there is a risk it will introduce subject-matter, given that only the background of the invention mentions use with a single string (see page 5, lines 7 to 10). Because it will be filed in a divisional application, however, this application can proceed to grant even if the divisional application fails.

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