Rose Mooney's Harp - Some aspects of its design and construction.

List of Sections

Introduction - Dr. MacDonnell's description

Points made in MacDonnell's description:
(1) The number of strings and the harp's musical range
(2) The method of fixing strings in soundboard ("belly")
(3) The condition of the soundboard ("belly")
(4) The construction of the soundbox ("body") and copper reinforcement

General observation

Addendum - Why Rose Mooney's harp is not the Royal Irish Academy No. 2 harp

Endnotes

Appendix - The possible use of string hole pegs on earlier harps

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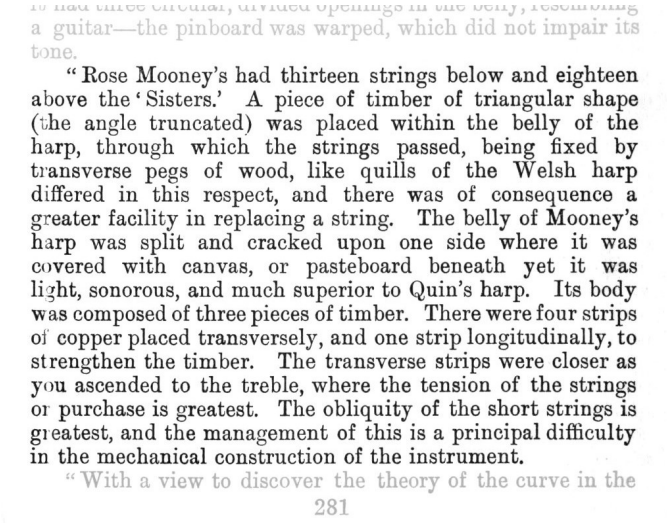
Introduction - Dr. MacDonnell's description

It was purely by a chance that early in the twentieth century, Charlotte Milligan Fox came across Edward Bunting's papers. [1] Amongst these was a letter written to Bunting from his good friend Doctor James MacDonnell, which contained some notes MacDonnell had made concerning the harp belonging to Rose Mooney, one of the harpers who had performed at the 1792 Belfast Harp Gathering.

Charlotte Milligan Fox later presented her collection of Bunting's papers into the safekeeping of Queen's University Belfast, where they are now preserved in the library; [2] but previously she had included a transcript of this letter in her 1911 work *Annals of the Irish Harpers*, a volume that has been a prime source of reference for scholars of the Irish harp for over a century. [3]



had three circular, divided openings in the belly, resembling a guitar—the pinboard was warped, which did not impair its tone.

"Rose Mooney's had thirteen strings below and eighteen above the 'Sisters.' A piece of timber of triangular shape (the angle truncated) was placed within the belly of the harp, through which the strings passed, being fixed by transverse pegs of wood, like quills of the Welsh harp differed in this respect, and there was of consequence a greater facility in replacing a string. The belly of Mooney's harp was split and cracked upon one side where it was covered with canvas, or pasteboard beneath yet it was light, sonorous, and much superior to Quin's harp. Its body was composed of three pieces of timber. There were four strips of copper placed transversely, and one strip longitudinally, to strengthen the timber. The transverse strips were closer as you ascended to the treble, where the tension of the strings or purchase is greatest. The obliquity of the short strings is greatest, and the management of this is a principal difficulty in the mechanical construction of the instrument.

"With a view to discover the theory of the curve in the

281

Extract from page 281 of *Annals of the Irish Harpers*.

I first read *Annals* in 1978 and remember discussing this description with some harpmaking friends and colleagues in the early 1980s. The meaning of MacDonnell's words was clear to all of us, and although he wrote only a few lines on this harp, those six sentences provide crucial insights into the following important features: the number of strings and its range, the method of fixing the strings in the soundboard, the condition of the soundboard, and the construction of the soundbox.

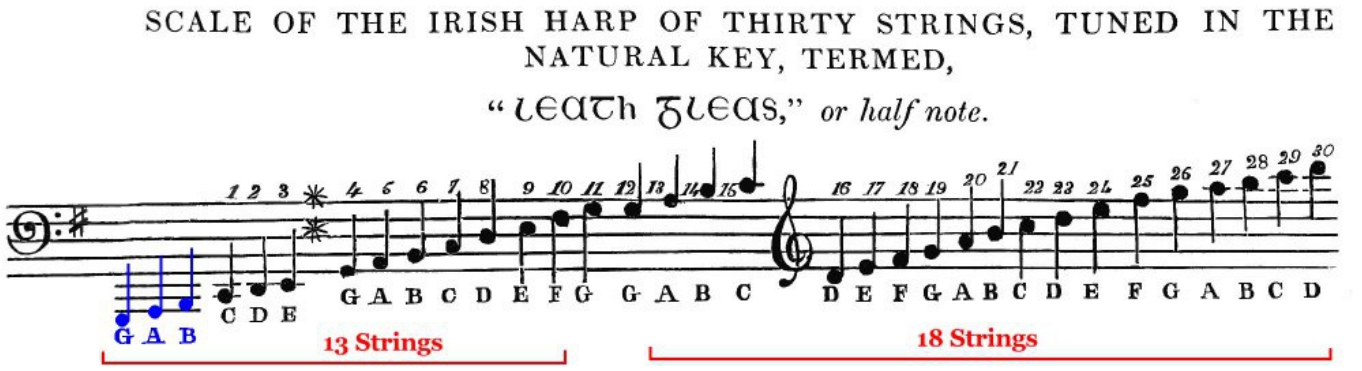
The points of observation made in MacDonnell's description

I shall list and deal with these four points in order, with MacDonnell's text placed in quotation marks:

(1) The number of strings and the harp's musical range:

"Rose Mooney's had thirteen strings below and eighteen above the 'Sisters.' "

Including the two "Sisters" this would mean a total of thirty three strings. Bunting had noted the tuning of Dennis Hempson's thirty-string harp and published it in his 1840 volume *The Ancient Music of Ireland*. [4] From this we can see that Mooney's harp had its extra three strings in the bass, and that the lowest note would likely have been G.

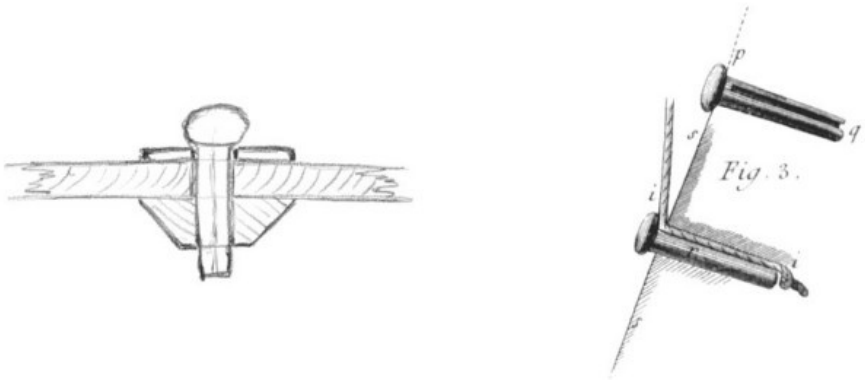


Tuning taken from *The Ancient Music of Ireland*, p. 23. With 'Mooney's' probable three extra strings added in blue.

(2) The method of fixing strings in soundboard ("belly"):

"A piece of timber of triangular shape (the angle truncated) was placed within the belly of the harp, through which the strings passed, being fixed by transverse pegs of wood, like quills of the Welsh harp differed in this respect, and there was of consequence a greater facility in replacing a string."

Here MacDonnell first notes the addition of a strip of wood to the inside of the soundboard, "through which the strings passed", something that most harp makers would instantly recognise as an inner string-bar, or string-rib. This feature is certainly not unknown on Irish harps of the 18th century, and they are to be found on the Kearney No. 1, Kearney No. 2 and the V&A harps. MacDonnell then relates how the strings were fixed in place by pegs of wood that passed through the board and strip (i.e. transverse, from the outside through to the inside). He likens these to the "quills of the Welsh harp" and points out that in this respect, the arrangement differed, i.e. that it was not how the strings on the other harps were fixed. Here he was describing a method commonly used on other forms of harp during the 18th and 19th centuries, including the Welsh harp [5], whereby the end of the string was first tied with a "stop knot" or secured to a toggle. It then passed through a hole in the soundboard, after which a small wooden peg was inserted into the hole to plug the gap so the string couldn't be pulled back out. On wire-strung instruments the toggle would have been a short piece of small-diameter metal rod [see Appendix]. Using this method to string the harp from the front does indeed provide "a greater facility in replacing a string".



A sketch showing a cross section through the soundboard and string-rib of Mooney's harp. And an illustration of mid-eighteenth century soundboard pegs from Diderot & d'Alembert's *Encyclopedia*, vol. 5, 1767.

(3) The condition of the soundboard ("belly"):

"The belly of Mooney's harp was split and cracked upon one side where it was covered with canvas, or pasteboard beneath yet it was light, sonorous, and much superior to Quin's harp."

It is hardly surprising that the soundboard was split and cracked, as very few of the old harps managed to survive without suffering some degree of damage to their boards, and covering the rift "beneath" (i.e. on the inside of the soundboard) with some sort of patch makes perfect sense. MacDonnell doesn't seem too certain whether the patch was of canvas or pasteboard, but that very fact suggests that the material was substantial and of some thickness. [6] Yet in spite of this, the harp was "light and sonorous and much superior to Quin's harp" (the instrument now known as the Castle Otway harp). [7]

(4) The construction of the soundbox ("body") and copper reinforcement:

"Its body was composed of three pieces of timber. There were four strips of copper placed transversely, and one strip longitudinally, to strengthen the timber. The transverse strips were closer as you ascended to the treble, where the tension of the strings or purchase is greatest."

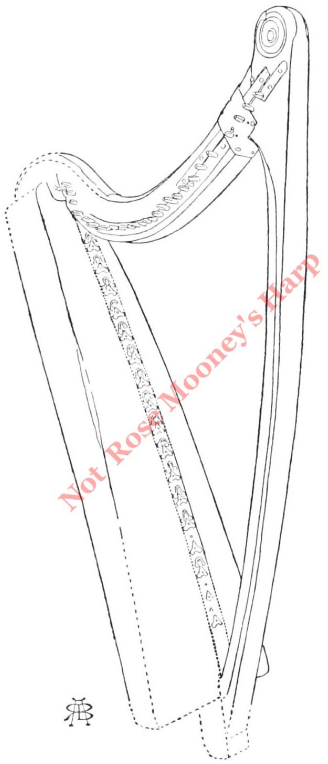
It is apparent from this that the soundbox of Mooney's harp was not made in one piece, in the ancient manner of hollowing it out from a single block of wood, for he states quite clearly that the box was assembled from "pieces". Technically, one might expect that it would require six pieces to make a box; but MacDonnell is probably simplifying, merely giving the soundboard and the sides, not bothering to mention the two ends or the back (which would likely be considered a separate item anyway).

The longitudinal strip of copper would have meant the band of metal which runs up the centre of the soundboard on many harps. [8] These were drilled with holes, through which the strings passed, and they served a similar function to that of the brass shoes generally found on the older harps. The transverse strips could have served the dual purpose of helping to bind the segments of the box together, as well as preventing the aforementioned split in the board from opening up any further. The fact that they were closer in the treble might suggest that this is where the crack was at its worst. [9]

General observation

It is regrettable that we have no further information on Rose Mooney's harp - which no longer survives - for it clearly left a positive impression on Doctor MacDonnell. He comments that, in spite of its damage, "it was light, sonorous and much superior to Quin's harp". In contrast, those of Fanning and Black barely warrant a passing mention. [10] It is clear that the maker had produced a fine-sounding instrument, though MacDonnell may also have been impressed by the artisan's apparent willingness to incorporate contemporary ideas into his design. Rose Mooney's harp provides evidence that, contrary to what some may believe, the Irish harp was not necessarily stuck in some static tradition of construction, but rather was being made in a continuing state of adaption and development.

Addendum - Why Rose Mooney's harp is not the Royal Irish Academy No. 2 harp [11]



Armstrong's drawing of the Royal Irish Academy No. 2 harp taken from *The Irish and the Highland Harps*.

Many years ago I became aware of a suggestion being put forward that the harp known as the "Royal Irish Academy No. 2" was the same one that Dr. MacDonnell described as belonging to Rose Mooney. In 2007 I began a long-term program of studying the old Irish harps in various museums, and was interested to investigate this claim further. A preliminary look in 2007 was then followed by more thorough examinations in 2008. In addition to direct physical observations, my various studies of the RIA No. 2 also incorporated taking photographs (including some in stereo imagery) of both its external and internal structure. After extensive investigation I reached the unavoidable conclusion that MacDonnell's description does not match this instrument.

Having realised the lack of validity of the claim that the RIA No. 2 had belonged to Rose Mooney, I expressed my concerns and explained my findings regarding the physical evidence to one of the chief proponents of the theory. Regrettably, he was unconvinced at that time, and so continued naming the RIA No. 2 as the "Rose Mooney harp". Over the years, this idea has spread to such an extent that the misconception seems to have become accepted as fact, and been repeated as such in several sources.

However, as those who have discussed this instrument with me in person will know, I have always maintained that it is not Rose Mooney's harp, and the summary given below demonstrates why. The following compares Dr. MacDonnell's description of the Rose Mooney harp with what is actually to be found on the Royal Irish Academy No. 2 harp:

"Rose Rooney's had thirteen strings below and eighteen above the 'Sisters.' [i.e. 33]"

On the soundboard of the RIA No. 2 there are 36 holes with string shoes, and another one with a staple at the very top, giving it a potential total of 37 usable string holes. In the neck, which is very smashed up, and where pins have been repositioned, there may have originally been a maximum of 37 or 38 tuning pins, although 36 seems the most likely initial number. It could be suggested

that not all of the strings would have had to be strung, but 36 is not 33; thus there is nothing here to suggest that the RIA No. 2 was the same instrument as Mooney's.

"A piece of timber of triangular shape (the angle truncated) was placed within the belly of the harp, through which the strings passed, being fixed by transverse pegs of wood, like quills of the Welsh harp differed in this respect, and there was of consequence a greater facility in replacing a string."

There is no such piece of wood inside the soundboard, and no sign that there ever was (e.g. no residual marks or traces of glue are to be found). Not only were there no pegs through the belly, but the string holes in the belly are far too small to allow for the possibility of any ever being fitted. Therefore the RIA No. 2 would have to be strung through from the back, in the conventional manner, which would not have allowed a "greater facility in replacing a string" as MacDonnell stated.

"The belly of Mooney's harp was split and cracked upon one side where it was covered with canvas, or pasteboard beneath yet it was light, sonorous, and much superior to Quin's harp. Its body was composed of three pieces of timber. There were four strips of copper placed transversely, and one strip longitudinally, to strengthen the timber. The transverse strips were closer as you ascended to the treble, where the tension of the strings or purchase is greatest."

Apart from a split (a few inches in length) coming up from the bass end of the soundboard, near the right hand corner, the soundboard ("belly") itself has not suffered the sort of stress-fracturing that is found on many of the other old harps. What cracks there are in the soundbox have been caused by traumatic impact damage, with the largest split running down the left side (face) of the box - not the soundboard. These splits have been repaired with short strips of iron nailed onto the outside; but, unlike some other harps, none of them runs "transversely" right across the soundboard, and nowhere has any canvas or pasteboard been glued on beneath them (i.e. onto the inside surface) to augment this repair.

Moreover, all of the metal strapping to be found anywhere on the RIA No. 2 is of iron, not copper. There is no longitudinal strip for the strings to pass through, but rather the board is fitted with a variety of brass string shoes. Also, the soundbox ("body") of this harp is not made up from "pieces", but was instead formed in the older manner, by hollowing the shape out of a single block of wood - a fact that had already been well noted and published by Robert Bruce Armstrong in 1904, and Joan Rimmer in 1969. [12]

To sum up, the observations that Dr. MacDonnell made of Rose Mooney's harp in or around 1792 do not fit the Royal Irish Academy No 2; indeed, his notes indicate that it is not the one that belonged to her.

Endnotes

[1] For an account of this event see the article first published in the *Folk Harp Journal* (Summer 2015) and reproduced on this website:
Bonnie Shaljean, *The Parting of Friends* -
https://www.wirestrungharp.com/music/milligan-fox-parting-of-friends/

[2] Library, Queen's University Belfast, Bunting Manuscripts. The manuscript reference for the letter itself is: MS4-35/16. Unfortunately this letter, headed "Sunday Night", is not dated.

[3] Charlotte Milligan Fox, *Annals of the Irish Harpers*, 1911. pp. 279-282.

[4] Library, Queen's University Belfast, Bunting Manuscripts, MS4-29. The page bearing the number 153 is annotated "Hempsons Harp 1702".
See also Edward Bunting, *The Ancient Music of Ireland*, 1840, p. 23.

[5] Dr. MacDonnell would have been familiar with how the "quills of the Welsh harp" worked, as there was a Welsh harper (Williams) at the 1792 meeting in Belfast where he "had all the harps measured".

[6] Strong material, further reinforced with some sort of glue, resin, varnish etc., has been used for a very long time, both for repair work and as a construction material in its own right. In the case of repairing old harps, there are a number of examples: The Lamont harp had vellum glued to the inside, as part of a very old reinforcement to a cracked

soundbox. It is noted that the Trinity College harp was patched with canvas prior to its restoration in 1962; and the V&A harp has some canvas glued onto the inside of the box, at the top left edge of the soundboard, and also across a split in the back-board. (Patches of timber, affixed across damaged and split soundboxes, are also found on the Belfast O'Neill and V&A harps.)

[7] Dr. MacDonnell's observation respecting Quin's harp is an interesting one; for although Quin was playing the Castle Otway harp at the end of the 18th century, it is more likely to have been made some two centuries earlier, at a time when both the music and the role these instruments had to fulfill were different. The perceived inferiority of Quin's harp can probably be accounted for by his having to use and tune it to suit the requirements of the late 18th century, rather than those for which the instrument would have originally been intended. Indeed, from my own experience in making harps which are close to the Castle Otway in form, structure, and string-length, I see no reason why it should not have sounded fine - but only assuming that the harp is tuned in a gamut that fits its design, and not an inferior one imposed on it.

At the 2018 World Harp Traditions Conference held in Limerick at the Irish World Academy of Music and Dance, University of Limerick, Dr. Paul Dooley gave a presentation titled "The Castle Otway Harp: A string Scale Analysis". I totally concur with his observation that its string scaling would work perfectly well if strung in brass, and tuned to a different scale to that implied by Bunting in his late 18th-century notes. For example, with a higher gamut, beginning from modern F (~87 Hz) in the bass, the Castle Otway could be tuned in C, rather than G, and would likely be more suitable for music prior to the mid 17th century. This is an opinion that I have long advocated.

[8] Some examples of harps that utilised a central metal strip are: The Castle Otway, Sirr, Bunworth, Belfast O'Neill, Hollybrook, Reverend Best, Kearney No. 1 and Kearney No. 2 harps.

[9] Some examples of harps that have had straps added across the soundbox: The O'Ffogerty, Kildare, Downhill, Magenis, Reverend Best, and Kearney No. 1 harps.

[10] Dr. MacDonnell had very little to say about the instruments of these two harpers. The following sentences, found immediately before the description of Rose Mooney's harp, are all he wrote concerning them:

"Fanning's harp had thirty-five strings, fourteen below and nineteen above the 'Sisters' - the eleven upper strings of iron wire. Mr Shannon, an Organist, I believe at Randalstown (when there was no Organ at Belfast) constructed a gamut for Fanning's harp."

"Black's had eleven below and twenty-one above 'Sisters' it had three circular, divided openings in the belly, resembling a guitar - the pinboard was warped, which did not impair its tone."

It may be significant that MacDonnell did not comment on any of the other harps played at Belfast, though it is apparent that he studied them in some detail. In the sentence following his account of Mooney's harp, he writes:

"With a view to discover the theory of the curve in the pinboard, I had all the harps measured carefully, preparatory to engraving them upon a scale, but these notes are lost by Mr John Mulholland, who took them to London, I had no duplicate."

A momentous loss indeed.

[11] The Royal Irish Academy's "No. 2" harp is listed as such in William Wilde's *A Descriptive Catalogue of the Antiquities in the Museum of the Royal Irish Academy*, 1857, and is so named because it was the second harp that the Academy acquired. They purchased it for six pounds from a Mr. P. Carlton* who claimed to be a descendant of Turlough O'Carolan and that the instrument had belonged to the famous harper. For this reason the harp is sometimes called the "Carolan harp". However, this supposed provenance was not given much credence and never promoted by the Academy and was actively scorned and derided by George Petrie who considered Carlton to be a "wretched imposter".

*(see the accounts for the period April 1847 - March 1848 published in the *Proceedings of the Royal Irish Academy*, vol. 4 (1850), p. xvi.)

[12] Robert Bruce Armstrong, *The Irish and the Highland Harps*, 1904, p. 83.
Joan Rimmer, *The Irish Harp*, 1969, p. 75.

Appendix - The possible use of string hole pegs on earlier harps

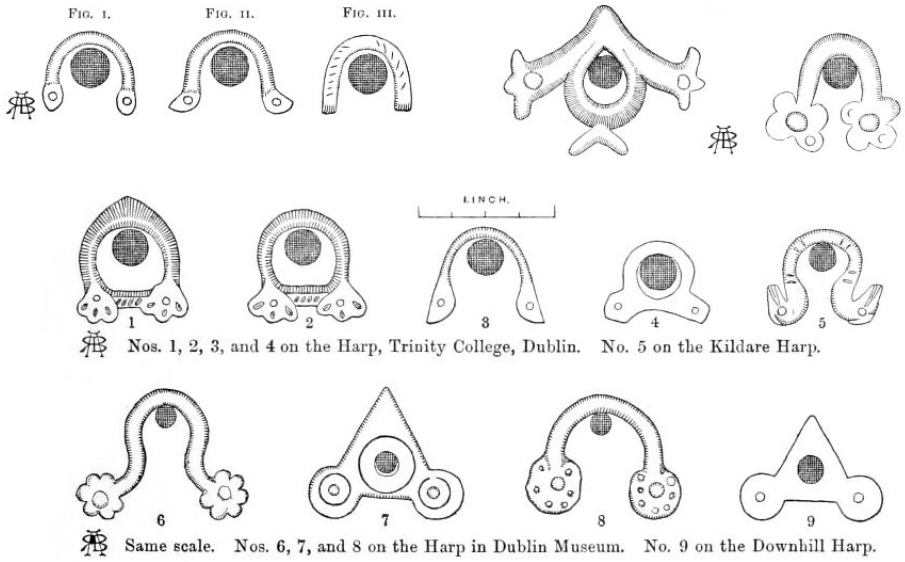
Following MacDonnell's observation on the use of wooden pegs to fix the strings in the soundboard, it should perhaps be noted that the technique of using a peg to help secure a string in its hole is actually very old. These are often depicted in illustrations of mediaeval European harps - in fact they could almost be regarded as the norm for that time. But what of the ancient wire-strung harps of Ireland and Scotland?

It is true that the string holes of many surviving 17th- and 18th-century Irish harps are too small to take such pegs, but this is not the case with the most ancient of the clarsachs; for the holes in the

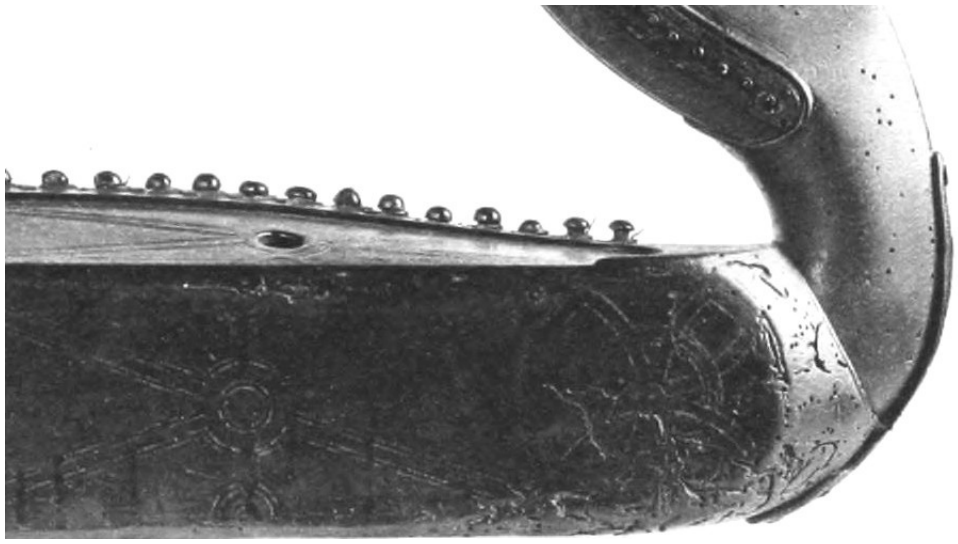
soundboards of the Trinity College and Lamont harps are certainly large enough to allow for the use of a peg. Moreover, the other famous mediaeval instrument, the "Queen Mary", did actually utilise string pegs when it was restrung at the beginning of the 19th century, and most of them are still on the harp to this day. Although they were probably fitted c.1806, they could not have been added if the holes in the soundboard were not already of sufficient diameter to allow for it.

In addition, indentations visible around the string holes inside a few of the older harps indicate that some of them had used short metal rods as string-toggles, rather than the wooden ones employed on later harps. The significance of this is that a narrow metal rod would have been thin enough to pass through the soundboard hole, thus enabling the harp to be strung from the front; whereas the larger wooden toggle could not, in which case the string would have had to have been strung from the inside.

This circumstantial evidence may not be conclusive, but the possibility that some of the earlier harps were made with the original intention of using soundboard pegs cannot be dismissed. Perhaps the maker of Rose Mooney's harp was only revisiting an ancient technique.



Examples of string-shoes and hole sizes from Armstrong's *The Irish and the Highland Harps*. The top three on the left are from the "Queen Mary" harp, next two from the Lamont harp. N.B. "Harp in Dublin Museum" is RIA No. 2.



Photograph from *The Irish and the Highland Harps* showing the soundboard string pegs on the "Queen Mary" harp.