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THE WELSH CRWTH, ITS HISTORY,
AND ITS GENEALOGY

THESIS

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By

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In the early years of the nineteenth century, when bowed string instruments were assumed to have reached the apex of their development, there arose among antiquarians and scholars a widespread interest in tracing the ancestry of the violin and related members of the chordophone family. This task proved to be exceedingly formidable not only because of the enormous amount of often obscure evidence which had to be taken into consideration but also because of the manner in which many items of evidence seemed to contradict each other. The issue is still not resolved to the complete satisfaction of every party concerned. Literally scores of different and often conflicting arguments have been advanced, and it could perhaps be justly said that the only furtherance thus far realized has been that of the confusion rather than the resolution of the issue.

One of the most perplexing matters has been the place of the Welsh crwth in the history of European chordophones. Cultural isolation and isolationism, linguistic esotericism, terminological looseness and ambiguity, and a lack of

sufficient understanding of the place of the bowed lyre -- especially as opposed to that of the violin -- within the family of string instruments augment the usual organological problems to make the situation especially fascinating but very nearly impossible.

It is the purpose of this study to present facts, theories, hypotheses and conjectures pertaining to the history and genealogy of the modern crwth, to advance a new although not totally original set of ideas regarding these two issues, and in so doing, perhaps eliminate some of the confusion which has heretofore prevailed.

Sources fall into five large categories. The first of these includes printed books, encyclopedia and periodical articles, and publications of learned organizations. A second category includes musical examples taken from sound recordings. The third category is that of musical examples and other information obtained either during personal interviews or from personal observation. A fourth category includes manuscripts, letters, and an unpublished monograph. The fifth and final category is that of statistics obtained during personal examination of extant specimens and significant replicas of specimens of the instrument, pertinent iconographic representations, and an instrument constructed for the purpose of performing experiments in basic areas of performance practice.

The first part of this study treats of the modern instrument almost exclusively. Covered are etymological problems, the structure of the instrument, and an investigation of the history of the instrument. The sub-section on history is in part illustrated by the first thirteen of the sixteen recorded examples. An appended section consists of a descriptive catalog of extant specimens, important replicas, and a reconstruction, together with a brief treatment of the issues of instruments of questionable origin and the possibility of the crwth's one-time existence in North America.

It seems almost certain that the crwth represents nearly the end of the long and complex development of the European bowed lyre rather than the beginning of the modern bowed chordophone. The bowed lyre seems to have come into being when the bow, an Eastern incursion, was applied to the numerous different European plucked lyres. After acquiring the bow and probably the fingerboard from the Eastern instruments, which are the true ancestors of the violin and its immediate relatives, the European lyre followed a largely independent course of development. The lyre borrowed from Greco-Roman civilization remained primarily a plucked instrument, and the end of its development in Europe is the lyre-guitar, which survived into the nineteenth century. The bow seems to have been applied principally to cruder instruments, whose structures may have been influenced by Eastern

yoke lyres. After the collapse of minstrelsy, the surviving bowed lyres became folk instruments and thrived in Wales, Scandinavia, Estonia and Russia. Although the continental instruments still survive in practice, the crwth was forced into oblivion by the rise of evangelical protestantism and the corresponding decline of dancing and other secular pastimes during the eighteenth and early nineteenth centuries. After the waves of religious fervor had subsided, the void created by the crwth's disappearance was filled by the violin.

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FOREWORD

In tracing the history and genealogy of a musical instrument, one must either find or postulate defensible answers to each of the following questions:

1. Does the instrument's name have any significance?
2. What are the structural characteristics of the instrument?
3. How is, or how was, the instrument played?
4. Was its status that of an instrument of art music or that of an instrument of folk music, and was there ever a change from one class to another?
5. Can the instrument be associated with either a certain geographical area or a particular people, and if it can, what role has it played within the culture of the region or people?
6. Did the instrument as it now exists develop spontaneously, and if it did not, from what earlier instrument or instruments did it spring and what is its relationship to other members of its family?
7. Did there transpire any changes in either the instrument's structure or the performance practices associated with the instrument following its initial appearance, and if there did, what factors, musical or otherwise, bore upon these changes?

8. Is the instrument still in use, and if it is not, what are the reasons for its having been dropped from use?

One of the most formidable obstacles which one faces in his attempt to answer these questions is the size and complexity of any family of musical instruments. The problem is frequently compounded by the presence of hybrids, gaps created by missing links, and the many different and often questionable systems of classification and differentiation.

A second major difficulty is the non-linear manner in which many instruments have evolved, undergone mutational processes, and eventually combined with other instruments, each of which has often gone through an equally complex life cycle. Such combinations often give rise to not one but several new instruments, whereupon the process begins anew in each case. If instrument X always became instrument Y, which in turn inevitably became instrument Z, the task of tracing an instrument's genealogy would not be as difficult as it frequently is.

Rare or extinct instruments pose an especially difficult problem because first-hand knowledge of many important facts is virtually if not totally impossible to realize. This situation forces one to turn to various types of icons as well as both verbal and documentary evidence. Such an

alternative is not without its problems, however. Documentary evidence frequently contains inconsistencies and contradictory statements regarding such critical matters as structural features and dates of major developments. The reliability of both documentary evidence and orally communicated information is hampered by the influences which nationalism and other prejudices, folk tales, and extreme looseness of terminology have upon both the writing of descriptions and the bases of contemporary beliefs. Further, all sources of information -- human, documentary, and iconographic -- are subject to the ravages of both time and the elements.

The matter is complicated further when specimens of the instrument's most important forebears no longer exist. In such a situation, the appearance and mutation of each of these forms must be traced from both literary and iconographic sources. Reliance upon either form of evidence alone is dangerous. Literary references are often insufficiently specific, and iconographic representations are not always technically accurate.

Reliable evidence usually exists, but one must determine just what evidence is reliable. After usable items have been isolated, correctly dated, and placed in proper order, both knowledge and logic must be employed to fill the gaps between these often widely spaced evidential touchstones.

Hopefully, this process will result in the formulation of a rationally tenable thesis of how all the parallel, opposing, converging, diverging, intersecting, and interlocking forces apparently acted to produce the instrument under consideration. In arriving at each conclusion, one must carefully weigh all plausible ideas, a large number of which will be little more than conjectures. The value of conjecture varies greatly and must be determined in each case. One may more than once find himself unable to go beyond the point of conjecture, and he should be constantly aware of the dangers involved, taking all necessary pains to make it clear that his ideas are not meant to be considered truisms.

This study of the crwth treats of each of the questions posed above, and the problems associated with their answering are dealt with in the manner just described. Since the most recent, or the "modern," crwth is the chief subject of this monograph, the introductory and etymological, structural, practical, and historical matters relating to the modern instrument are covered first. Their disposal consumes, respectively, the first, second, third, and fourth chapters, or the first part of the document.

The second part of the thesis, the section covering the modern crwth's genealogy, consists of two chapters which briefly trace the history of the lyre (Chapter V) and present both past and present ideas about what place the crwth occupies within the lyre family (Chapter VI).

A large appendix consists of an illustrated catalog of the known specimens of the modern crwth, similar information about significant replicas and reconstructions, some largely speculative writing about instruments whose origin or current existence is in most cases an issue of uncertainty, and a short sub-section treating of both the possibility of the crwth's having been exported to North America and the signs which strongly suggest the influence of both the instrument and its music upon the "country fiddle" of rural America.

A companion recording serves as a source of audible musical examples. These examples are referred to within the text as "Recorded Example 1," "Recorded Example 2," and so forth, in contradistinction to "Example 1," "Example 2," and so forth, which are references to notated musical examples which appear within the text.

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CHAPTER I

BACKGROUND INFORMATION

Introduction

General Description

The crwth¹ (krwth, krwyth and crwyth;² cruth and crudh; crout, crouth, crouthe, croud, croude, crowd and crowde;³ krote, krotte, chrotta, rote, rotte and rotta;⁴ crot, cruith

¹ Crwth, occasionally spelled c-r-w-t-h, is usually pronounced "krooth," although "krúth" is sometimes heard. The Welsh c is hard, the r is trilled, the w, when functioning as a vowel, is pronounced either "oo" or "ü," and the th is voiceless. The Welsh plural is crwthau ("kr~~o~~th-ahee" or "kr~~o~~th-ih"), and a crwth player is called a crythor (plural: crythorion). From this point, both English terms and English plurals will be used.

² The Welsh y is pronounced "i" both in most monosyllabic words (see below) and in the final syllables of both bi- and polysyllabic words, but it is most frequently pronounced "e" whenever it is encountered in any other syllable. The y is also pronounced "e" in the words y and yr (the), yn (in), fy (my), and dy (your, singular).

³ French and Norman English terms with a multiplicity of meanings, one of which is fiddle. According to Joseph Wright, "Crowd," English Dialect Dictionary (London, 1898-1905), I, 817, crowd(e) can be pronounced either "krood" or "kreood," depending upon the geographical location.

⁴ Continental terms denoting plucked lyres, bowed yoke lyres, and in some instances, rebecs and waisted fiddles, but rarely if ever modern bowed instruments.

and cruit;⁵ and chorus and choro⁶) is a small, symmetrical yoke lyre with bridge, tailpiece, and fingerboard (Plate 1). Four of the instrument's six strings pass along the fingerboard, are activated with a bow, and are stopped by the fingers of the left hand. The remaining two strings lie to the left of the fingerboard and are plucked by the thumb of the left hand. The most recent form of crwth is the most highly developed of the European bowed lyres whose basic structures were not influenced by modern string instruments.

The Problem

The question of the crwth's history and ancestry has been both studied and debated for the last two hundred years. It would seem in order at this point to examine all significant beliefs and currently known facts pertaining to the matter and, using these beliefs and facts as both references and controls, formulate yet another set of ideas which, although perhaps not beyond challenge, could serve as a point of departure for future investigations.

⁵Gaelic terms designating both the crwth and other lyre-like instruments as well as certain small harps. None of these terms are fully synonymous with crwth. Crot and crwth share no common English literal equivalents. Cruit(h) and crwth possess only partial literal synonymy, and the same holds true of crot and cruit(h).

⁶Francis W. Galpin, "Chorus," Grove's Dictionary of Music and Musicians, fifth edition, edited by Eric Blom (London, 1954), II, 277. Chorus and choro were applied to various lyres during the interim, A.D. 1000-1300. Chorus and choro also denoted the bagpipe after ca. 1200.

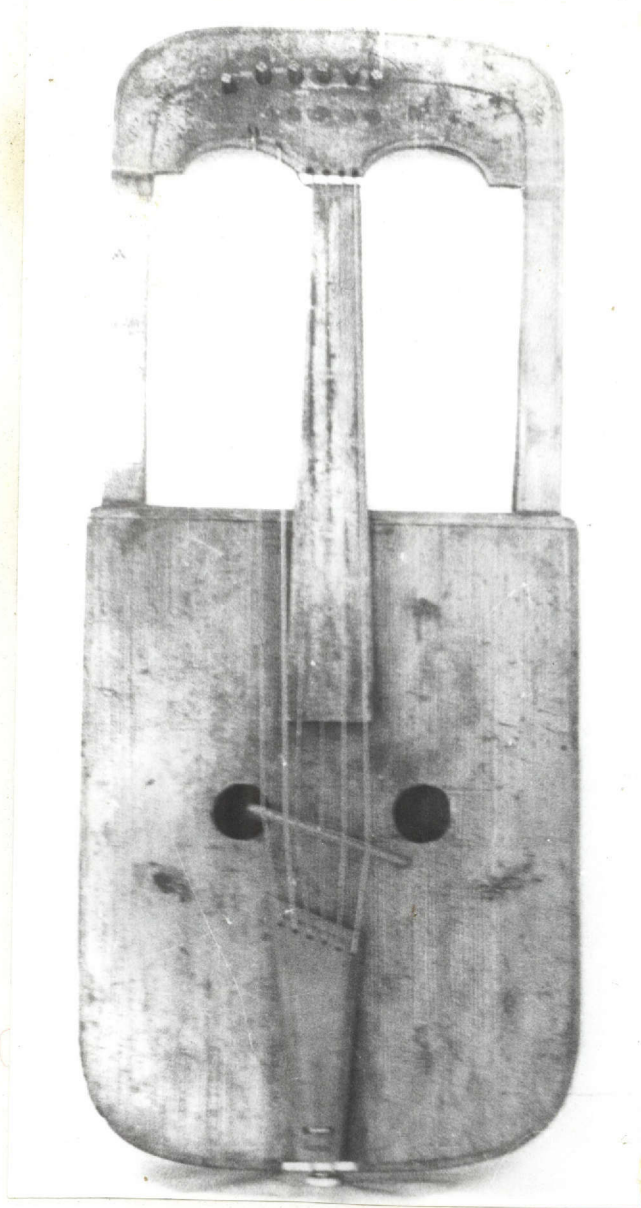


Plate 1--Modern crwth without bow⁷

⁷Collection of the Welsh Folk Museum, St. Fagan's, Glamorganshire.

Periods and Evidence

Periods.--The history of the crwth is divisible into two large periods. Of these, the first is the longer, covering a time span from ca. 3000 B.C. to about A.D. 1500. The second period runs from about 1500 to ca. 1850. It was during this time that the modern crwth was developed, used, and eventually discarded. One could perhaps argue that the history of the crwth includes a third period which runs from about 1920 to the present time. This era is characterized by both an interest in the genealogy of the instrument and a re-awakening of interest in crwth playing. Rather than a third period in the instrument's history, this interim seems to be the first period of both scholarly and practical investigation of important matters regarding its past. The interest in playing the crwth stems primarily from the instrument's antiquity, and this interest is little more than a tangential fancy with most contemporary practitioners. The crwth's function as a living cell in the socio-cultural organism ended over a century ago, and this point marks the terminus of its history.

. Evidence.--There is both documentary and iconographic evidence from the first historical period, and evidence from the second period consists principally of specimens and documents. To the evidence from the two historical periods

should be added the many late nineteenth- and early twentieth-century monographs which touch either in whole or in part upon the modern crwth.⁸

Etymology

Investigation of the etymology of crwth reveals a number of interesting facts. The most obvious is that not only crwth but also many related words, such as cruit, mean protuberance. According to Armstrong, cruit means "a hump on the back."⁹ William Richards (Welsh Dictionary, Carmarthen, 1828) defines crwth as "anything swelling out; a bulge, a trunk, a belly, a crowd, a violin."¹⁰

⁸ At the present time, the most extensive published work which treats of the modern crwth is Otto E. Anderson, The Bowed Harp, translated and edited by Kathleen Schlesinger (London, 1930). Although this book deals principally with Scandinavian instruments, it contains a large section devoted to the crwth.

In 1920, Meredith Morris of Glamorganshire wrote a work titled, "The Crwth." This monograph appears to have never been published, and it is currently housed in the Welsh Folk Museum at St. Fagan's, Glamorganshire. In light of the time at which the document was written and in view of the fact that Morris was not an organologist, the work is quite remarkable. The book contains neither significant technical information nor reliable genealogical data, but it yields much information about the place of the crwth in sixteenth-through early nineteenth-century Welsh culture.

⁹ R.A. Armstrong, Gaelic Dictionary (London, 1825), cited without page reference in Carl Engel, Researches into the Early History of the Violin Family (London, 1883), p. 29.

¹⁰ Carl Engel, op. cit., p. 28.

The most thorough discussion of the subject is in William Owen's A Dictionary of the Welsh Language (London, 1803).

Crwth: any body swelling out; a bulging, a paunch; a kind of box scooped out of a piece of wood and rounded, except on the side where the excavation is made, which is flat and covered with a board ending in a tail to hang it up by, when [sic] it appears much like a bottle, having a hole in the upper part of the rotundity, through which it is filled. It is used mostly to hold salt, and hence a salt box of any form is called a crwth halen. Also a musical instrument with six strings, the two lowest of which are drones struck by the thumb whilst the others are touched with a bow. It is much on the same principle with that of the violin, of which perhaps, it is the prototype, and the term is now used indiscriminately for both.¹¹

From this definition, one might conclude that crwth could mean merely a small, wooden box or coffer, but prennol is the word generally used in this capacity. It thus seems that crwth, as in crwth halen, had to do only with the characteristic paunch of a certain kind of box.

One might surmise that the crwth was at one time characterized by a vaulted back. Such a conclusion is seemingly reinforced by a poem by Gruffydd ap Daffydd ap Howel (ca. 1480 - ca. 1520).

¹¹Ibid.

Dyvaliad Crwth Yn ol Griff

Prennol teg bwa a gwregis,
 Pont a bran, punt yw ei bris;
 A thalaith ar waith olywn,
 A'r bwa ar draw byr ei drywn,
 Ac o'i ganol mae dolen,
 A gwar hwn megis gwr hen;
 Ac ar ei vrest gwyair vrig,
 O'r Mesarn vo geir Miwsig.
 Chwe' yspigod o's codwn,
 A dynna holl dannau hwn,
 Chwe' thant a gaed o vantaish,
 Ac yn y llaw yn gan llais,
 Tant i bob bys ysbys oedd,
 A dau-dant i'r vawd ydoedd.¹²

One can assume that back denotes either the back of the resonator only or the posterior surface of the entire instrument. If Gruffydd intended gwar to mean back, then he probably meant the hunched back of the instrument, not just the back of the resonator. Neck, the alternate meaning of gwar, can also be viewed in both narrow and broad contexts.

¹²Quoted by Edward Jones, National Library of Wales MS Additional 37.B (also listed as MS Williams 242, formerly Phillipps 20906), p. 20 (ca. 1790). Translation by the author of this thesis, with the assistance of Nansi Richards.

The Crwth, According to Griff [ith]

A little box with a bow and a girdle [belt, truss],
 A bridge [arch] and a [finger-] board; value: a pound;
 And the front thereof is modeled upon a wheel,
 With the bow across: short its nose,
 And from its center is a ring [loop],
 And this back [neck] bulges like [that of] an old man,
 And upon its breast lives harmony;
 From the sycamore [maple] comes music.
 Twist six pegs and all the strings are tightened;
 Six strings can be found advantageously situated,
 And in the hand are a hundred voices.
 Clearly there is a string for each finger,
 And two strings for the thumb as well.

Not only the neck of the instrument but also the yoke arms possess a distinctive hunch-backed appearance. It is possible that Gruffydd's simile has all too often been read in an overly technical manner. From such a reading, one could erroneously conclude that the modern crwth definitely had at first a vaulted back which was later flattened. Crwth may have been first applied to a lyre with a vaulted back, but to exactly what instrument the term was first applied is unknown.

It is possible that cruit and crot did not mean protuberance in the case of the lyre but rather "a sharp, high breast, such as the breast of a goose, a heron, or a curlew."¹³ It is also interesting to note that crottach means high-breasted.¹⁴ Cruit and crot¹⁵ may have been applied to the lyre because of its breast-like appearance rather than because of its vaulted back. Following this line of reasoning, it is possible that crwth was applied to either the same or a similar instrument because of its partial synonymy to the Gaelic terms.

Crwth and related terms denoted not only yoke lyres but also virtually any string instrument other than one of

¹³Eugene O'Curry, On the Manners and Customs of the Ancient Irish (London, 1873), p. 237.

¹⁴Otto Andersson, op. cit., p. 202.

¹⁵Crot may have been a contraction of crottach.

either the harp or zither family.¹⁶ It seems that the synonymy of crwth and violin was accepted in some academic circles.¹⁷

The looseness of terminology has given some Celtic nationalists a seemingly good argument in defense of the idea that the modern crwth dates from no later than the early part of the second millennium of the Christian era. Some would even argue that the bow is a Celtic invention. This same looseness, however, somewhat invalidates their contentions, for all that can be said with certainty is that the Celts have had from very early times instruments which had either vaulted backs or shapes suggestive of the breast of a waterfowl.

Colloquial Expressions Employing Crwth and Crowd

A number of expressions and sayings within which crwth and crowd appear are shown in Table I, which begins on the back of the following page.

¹⁶The Welsh term for harp is telyn, and the Gaelic term is clairseach (also clarsach and clairseth). To complicate matters further, it is possible that cruit may have once denoted the smallest of Irish harps, and according to Gerald Hayes, "Notes on the Crwth," Y Cerddor, Series 2 (1931), 419, crowd came to be used very loosely in England after ca. 1530.

¹⁷"Crwth," Geilyfr Cerddol (ca. 1830; title page missing), p. 68, lists violin as a synonym of crwth. The same synonymy is indicated in Thomas Jones, "Violin," Geiriador Saesonaeg a Chymraeg (Denbigh, 1826), p. 457.

TABLE I
COLLOQUIALISMS EMPLOYING CRWTH AND CROWD

Sayings and Idioms	Meanings
Mwyn a crwth, myn ei grog.	He who is sweet on the crwth should be hanged.
canu crwth i fyddar	playing the crwth to a deaf man: wasting one's breath
myn'd a'i grwth yn ei gwd	to leave with crwth in bag: to go away disgusted
dweyd ei bader wrth ei grwth	saying his prayers to his crwth: telling his troubles to a friend
wedi torri tannau 'i grwth	to have broken his crwth strings: to have gotten himself into a predicament
Mae llais mwyn gan hen crwth.	An old crwth has a sweet voice. (said about a compulsive flatterer)
Ni chan crwth yn ei gwd.	We are playing the crwth in its bag. He needs to be given a chance.
Mae'r bwa ar draws y tannau.	My bow is across the strings. Everything is ready.

TABLE I -- Continued

Goren b'ol gwag i grwth, ond
llawn i grythor.

Dod dy grwth yn!

dilyn sudlan'r crythor

ymryson crwth a thelyn

fel crydd yn chwaren crwth

Daw gwyl, daw crythor.
Daw gwledd, daw crwth.

Eli y Crythor

digon o grwth a thelyn

Pob un at ei grwth ei hun.

A crwth plays well on an empty stomach,
but a crwth player does not.

Put away your crwth!
(said to a poor speaker, singer, or
actor)

living the life of a crwthier;
living solely for the pleasure of the
moment

conflict between crwth and telyn;
a disagreement between friends

like a cobbler playing a crwth;
simile denoting a clumsy person

Comes a holiday, comes a crwthier.
Comes a feast, comes a crwth.
(two cryptic adages, both of which refer
to a busybody)

Eli the Crwthier:
figurative personage whom a depressed
person was told to visit; also a remedy
for a despondent heart (eli; ointment)

master of crwth and telyn;
an entertaining person

Every man to his own crwth.
To each his own.

(continued on back of next page)

TABLE I -- Continued¹⁸

Sayings and Idioms	Meanings
Can crwth, can delyn, can gloch; can a fynnot.	Play crwth, play harp, play bells; play whatever you wish to play. Do as you please.
Wrth ei gusi y can crwth, ac nid wrth ei gico.	A crwth will play if stroked, not if kicked. (said to one who attempts to substitute force for reason)
Nid a bywell mae canu crwth.	One does not play the crwth with an axe. (a reprimand for a display of tact- lessness)
canu ei grwth	playing his crwth; boasting
canu'r crwth	playing the crwth; same function as immediately above whenever the antecedent is the name of a person, otherwise usually denotes the purring of a cat
the cat's crowding	the cat's purring
<u>crouden</u>	<u>to croak</u> , <u>to caw</u> , <u>to screech</u> , <u>to coo</u>

¹⁸ Most of the above expressions and idiomatic meanings are taken from Meredith Morris, op. cit., pp. 210-215. Literal translations are by the author of this thesis, with the assistance of Alun Davies. Expressions taken from other sources are as follows:

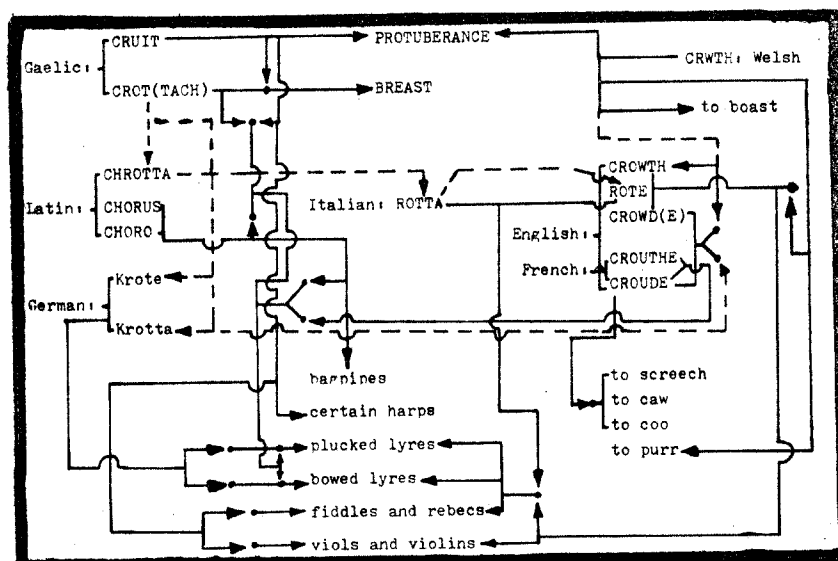
1. "Mwyn a crwth, myn ei grog.": Communicated by Ioan Evans (Nevin, Caernarvonshire, August 16, 1972).
2. "the cat's crowding": Joseph Wright, op. cit., I, 818.
3. crouden: Hans Kurath, editor, "Crouden," Middle English Dictionary (Ann Arbor, 1959), D.1, 769.

Conclusions: Etymology

The apparent relationship between crwth and other terms used to denote the lyre is illustrated below.

TABLE II

CRWTH AND RELATED TERMS, WITH BOTH MEANINGS AND PROBABLE DERIVATIONS



Key to symbols:

$\xrightarrow{\text{w}}$ = probable origin of X
 $\xleftarrow{\text{w}}$ = meaning(s) of X

$\left. \begin{array}{c} \downarrow \\ \downarrow \end{array} \right\}$ = either intersection
 or join

$\left. \begin{array}{c} \downarrow \\ \downarrow \end{array} \right\}$ = neither intersection
 nor join

$\rightarrow \bullet$ = direction not reversible

CHAPTER II

DESCRIPTION: THE MODERN CRWTH

The Body

General Comments

The body of the modern crwth, a homogeneous unit, is fashioned from a solid block of hardwood¹ and is approximately 57 cm. long, 23 cm. wide, and 4.5 cm. deep.²

The lower body is a resonating cavity, or resonator (anterior opening); and the upper portion is a bi-laterally symmetrical yoke with an integral crossbar, which is blended into a wide, flat, solid, frontal pegbox. A neck emanates from the lower pegbox and divides the yoke longitudinally. The four corners of the body are rounded slightly in most cases.

Details

Resonator.--The inner surface of the back is roughly perpendicular to the sides, and it is flat except for a degree of slope at the top of the cavity. The back is not necessarily parallel to the instrument's horizontal plane. The uppermost plane of the resonator either parallels

¹Sycamore, maple or birch.

²Important measurements of significant instruments are given in Table XVI, p. 158.

the instrument's horizontal plane or slopes downward (bottom to top, lateral-horizontal view, as in Figure 2). The outer surface of the back slopes upward near the top of the resonator, but the lower end wall does not slope. The top of the resonator is usually slightly narrower than the bottom due to a slight convergence of the sides.

Yoke and neck.--The base of the yoke is usually both slightly narrower than the uppermost part of the resonator and slightly wider than the crown of the yoke. The inner faces of the yoke arms and crossbar have a large, continuous channel resulting from the removal of excess material. The pegbox may either surmount the yoke or be on about the same level as the upper surface of the yoke arms. If it surmounts the yoke, its upper surface usually has a slight degree of downward slope toward the instrument's uppermost edge.

Two sets of six holes each are bored through the pegbox. The larger holes, which are for the wrest pins, taper very slightly from top to bottom. These holes, or sockets, are located either along or near an imaginary line which roughly parallels the uppermost edge of the instrument, are situated as closely together as practicality permits, and as a group are most often placed slightly to the left of the vertical centerline of the instrument.

Holes for the four central strings are bored through either the extreme lower center of the pegbox or the upper part of the neck, above the nut, and the holes for the bourdons are bored at points on the pegbox to the left of center.

The posterior surfaces of both the yoke arms and the neck slope gradually upward from bottom to top toward their flat anterior surfaces. The back of the neck is most commonly either semi-circular or arc-shaped. In some cases, the lines of the neck project into the resonating cavity and terminate inside it, providing an additional buttress for the belly to rest upon.

Separate Pieces

General Comments

The belly, fingerboard, nut, wrest pins, tailpiece, retainer, saddle, end-pin, bridge and strings are non-integral. Interior braces, whenever present, are also separate.

Details

Belly.--The belly, which is made of a single, flat piece of soft wood,³ is glued to the open top of the

³Most crwth bellies are made of deal, a soft, spongy pine whose grain is characterized by straight, even, parallel striations.

resonator. The side and lower edges of the belly are flush with the corresponding outer edges of the resonator, but the upper edge is usually butted tightly against a raised lip, which is an upward continuation of the outer part of the upper end wall of the resonator. The inner part of this wall is level with the tops of the other three walls (Figure 2, detail).

Fingerboard and nut.--The independent, hardwood⁴ fingerboard is glued to the upper surface of the neck. The base of the fingerboard is slightly shorter than the part of the neck to which it is fastened; and its lower end is set near, tangent to, or against the top outer edge of the resonator, leaving a small groove between the top of the fingerboard's base and the lower center edge of the pegbox. Within this groove is set and glued a nut,⁵ into which four vertical slots are cut for the central strings to pass through. The nut rises slightly above the level of the lowermost edge of the pegbox. The traditionally flat upper surface of the fingerboard slopes slightly upward, approximately paralleling the rise of the strings between the nut and the bridge. The fingerboard extends over the belly about one-third of the former's length.

⁴Fingerboard and body are usually made of the same type of wood.

⁵The nut is usually made of bone.

Some specimens have a nut over which the bourdons pass. This nut is set slightly below the bourdon orifices on the anterior surface of the pegbox.

Wrest pins.--String tension is regulated by quadrilateral headed, tapered harp wrest pins made of iron, steel or brass. The pins are inserted from the front and are turned with a harp tuning key (Plate 2). It seems that



Plate 2--Tuning keys⁶

⁶Collection of the Welsh Folk Museum.

some older instruments (no longer extant) had T-shaped wooden pegs. These pegs were turned by hand.

In all but two instances, in which the lower ends of the pins are vertically slotted, a hole is bored through the end of each wrest pin to accommodate the string.

Tailpiece, retainer, saddle and end-pin.---All six strings connect to a tailpiece,⁷ which in turn is secured with a gut or wire retainer to an end-pin made of either bone or wood. The retainer is sufficiently short to hold the lower end of the tailpiece down in contact with the lower edge of the belly. Erosion of the edge is prevented by the saddle, a small, rectangular strip of either bone or hardwood set into the belly at the point where the tailpiece rests. The leading edge of the tailpiece is most frequently oblique (descending, left to right), but there seems to have been no inviolable rule regarding this aspect of design. The tailpiece is generally both flat and quadrangular, and its underside is either flat or concave.

Bridge.---The fruitwood bridge, over which pass the strings, usually has a slightly convex upper edge and three feet, or legs. The right and usually the center leg rest on the belly, while the longer left leg passes through the left

⁷Like the fingerboard, the tailpiece is usually made of the same material that the body is made of.

soundhole and contacts the back of the resonator, thus functioning as a soundpost. A tapering from bottom to top lends the bridge a wedge-like shape. The bridge was usually set roughly parallel to the leading edge of the tailpiece, that is, obliquely across the belly. Its right foot usually rested below the level of the lower edge of the right soundhole, but it seems that in some cases the bridge was set straight across the belly.

Bingley reports one additional way of placing the bridge:

The bridge is placed . . . in an oblique direction, one end of it entering one of the soundholes . . . and the other being placed on the belly just above the opposite hole. . . .

[Usually] one end of the bridge is represented as standing in, and the other below, and not as in this case above the soundhole.⁸

The bridge with one foot serving as a soundpost is not peculiar to the crwth; it is found on the bowed lyra,⁹ the Bulgarian gadulka,¹⁰ and the modern continental chrotta.¹¹

⁸William Bingley, A Tour Round North Wales (London, 1800), II, 283.

⁹The bowed lyra is a form of rebec, not a variant of the inferior kithara of ancient Greece.

¹⁰Anthony Baines, "Ancient and Folk Backgrounds," Chapter IX of Musical Instruments Through the Ages, edited by Anthony Baines (London, 1961), p. 218.

¹¹See pp. 143-146.

Strings.--The strings were usually made of gut.

From the tailpiece, each string passes through its slot in the bridge's upper edge, through its slot in the nut (if it is a central string), through its hole in the pegbox, and through the hole or slot in the proper wrest pin. The central strings converge slightly toward the nut. The bourdons, which are approximately parallel to each other, slope downward and away from the central strings. Traditional string names appear in Table III (next page).

Frets.--Although it has been hypothesized that the fingerboard of the crwth could have been fretted with bands of gut,¹² there is no evidence of this having been done. If frets are to function properly, they must be parallel to the upper edge of the oblique bridge. Had such pains been commonly taken, there would probably be evidence to this effect.

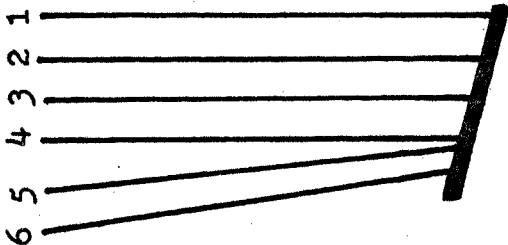
The Bow

It is likely that at least two different types of bow were applied to the modern crwth. The older type is represented by a specimen in the Welsh Folk Museum (Figure 3; also Plate 62, p. 214). The bow is said to date from the seventeenth century, but its design is much older.

¹²Francis W. Galpin, "Crwth," Grove's Dictionary of Music and Musicians, fifth edition, edited by Eric Blom (London, 1954), III, 551.

TABLE III

NAMES, USUAL NUMERICAL DESIGNATIONS,
AND ARRANGEMENT OF CRWTH STRINGS¹³

Welsh Names	English Translations	Numbers	Arrangement
Y Cras-dant	the Sharp String	1	
A'i Fyrdon	Bass of the Sharp String	2	
Byrdon y llorf-dant	Accompaniment to the Bass String	3	
Y Llorf-dant	the Bass String	4	
Y Cywar-dant	the Keynote	5	
A'i Fyrdon	Bass of the Keynote	6	

¹³Edward Jones, Musical and Poetical Relicks of the Welsh Bards (London, 1784), p. 42.

Bows having hair drawn between point and frog began to appear in the twelfth century,¹⁴ and extant icons seem to indicate that this design predominated by the middle of the following century. The bow in the Welsh Folk Museum is therefore probably patterned after bows used on instruments older than the modern crwth.

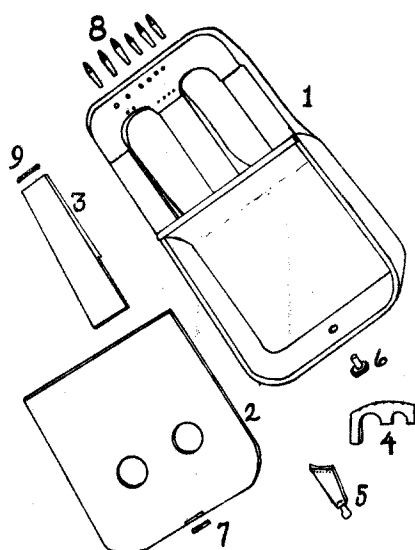
Judging from illustrations of modern crwths with bows, it seems that the most commonly used crwth bow was the convex bow with frog (Figure 4). Barrington evidently saw such a bow used, for he reports it to have been "rather an awkward one, much resembling that which they sell in the shops for tenor fiddles."¹⁵ It is not certain exactly what Barrington meant by tenor fiddle, but a bow sold in a shop during the late eighteenth century probably had a frog at its lower end.¹⁶

¹⁴Curt Sachs, The History of Musical Instruments (New York, 1940), p. 369.

¹⁵Daines Barrington, "Some Account of Two Musical Instruments Used in Wales," Archaeologia, III (1775), 31.

¹⁶The first dentated bow appeared in ca. 1680, and the first modern screw adjustment appeared about twenty years thereafter; yet Barrington speaks of the bow's awkwardness. Whether or not this awkwardness was due to the absence of an adjustable frog cannot be determined, but there is a strong possibility that it was.

Key:



1. body
2. belly
3. fingerboard
4. bridge
5. tailpiece and retainer
6. end-pin
7. saddle
8. wrest pins
9. nut

Fig. 1--Disassembled crwth; strings, bow and tuning key not shown.

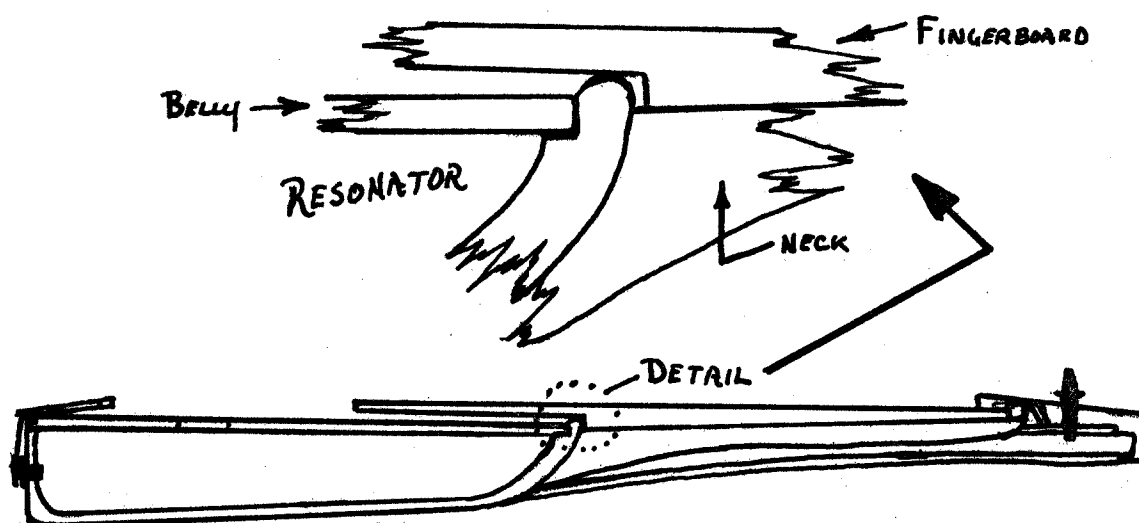


Fig. 2--Crwth, right lateral, fully sectioned; bridge and strings absent.

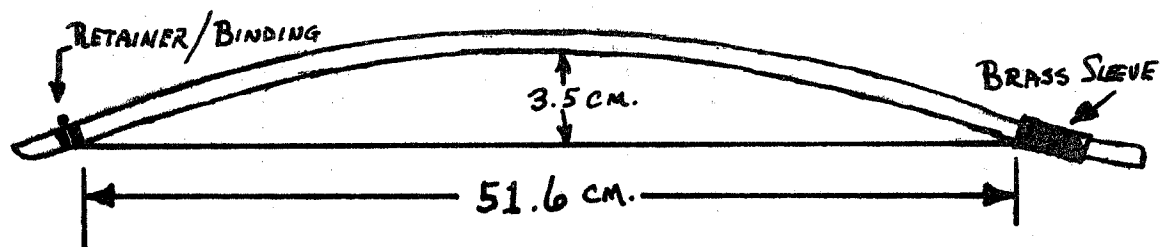


Fig. 3--Convex bow without a frog; Welsh Folk Museum

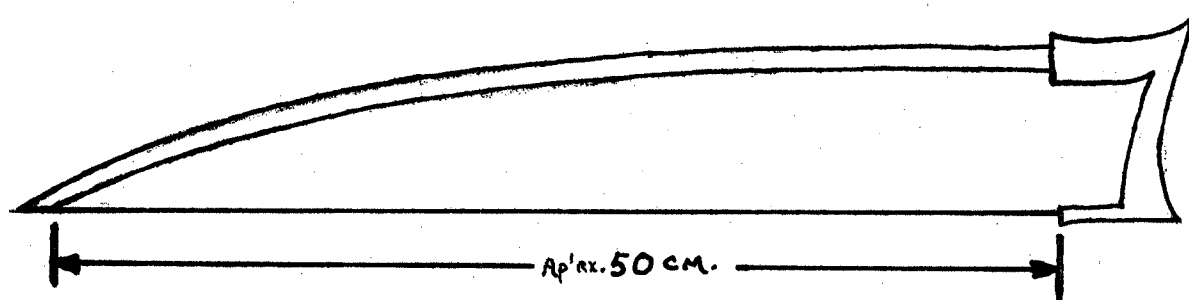


Fig. 4--Convex bow with frog (hypothetical)

CHAPTER III

CRWTH PERFORMANCE

The small amount of documentary data which treats of the techniques of crwth playing is in most cases so vague that only a few conclusions can be drawn from it, and at best, most of these conclusions are hypothetical and open to question. Some ideas, however, can be obtained from playing the instrument, and the latter part of this chapter is devoted to conclusions arrived at in this manner.

Documentary Data

Basic Types

Written material falls into two classes: literary and technical. Of these two classes, the former is the larger, and a few literary works such as Gruffydd's poem (p. 7) provide reasonably thorough descriptions of the instrument. A poem by Howel ap Tudur ap Jocws, "Ofyn Crwth i Mredydd Tan Wiliam ap Dafydd,"¹ likens the sound of the six-stringed crwth to the yowling of cats and the squeaking of mice. This, together with the adage, "He who is sweet on the crwth should be hanged," and Bingley's reference to the

¹ National Library of Wales MS Mostyn 145, pp. 339-341.

instrument's "unconquerable harshness"² of tone, seems to point toward the preference for a loud, abrasive sound.

Theoretical Material

The most extensive document concerning Welsh string music is British Museum Manuscript Additional 14905, also known as Manuscript Robert ap Huw.³ Contrary to some previous conjectures, it appears that the manuscript has little to do with the modern crwth, but some mention of the contents is in order, mostly to show why these conjectures seem specious.

Summary of contents.--Most of the manuscript, which was prepared by harpist Robert ap Huw in the time of Charles I (1625-1649),⁴ consists of short musical exercises and etudes in a tablature notation that somewhat resembles seventeenth-century German organ tablature. Lewis Morris added to this material a large amount of written data drawn from older documents.⁵ In Morris's addenda is a set of instructions

²William Bingley, op. cit., p. 284.

³Facsimile reprint published as Musica, edited by Henry Lewis (Cardiff, 1936). Original manuscript pagination is retained.

⁴Notational and scale systems seem to be the same as those in the writings of W. Penllyn, from whose book of ca. 1550 pages 23-34 of MS Additional 14905 are copied. See also Plate 3, p. 32.

⁵Morris, who owned the document from 1742 until his death in 1765, also added his own commentary.

for playing a "crwth" as well as short discourses on the "Twenty-Four Measures of String Music" and the "five established and warranted keys." A translation of the pertinent sections of this material follows.

This is the explanation of string music, and a guide to it, as it appears in strains and songs, that is to say the perfect notes and drawings.

There are eight key notes, (chords) primary and leading, and four minor key notes, (chords) to make one major key note; and from these are formed the staves, and from the staves the measures are formed, and from the measures are made the essays, the preludes, the songs, and the concords.

This is the reason why the conjunctions have their names, because they connect the key notes and the drawings.

The suppressions had their names, on account of their stopping between the perfect notes (key notes) and the drawings of the ties . . . of a tune; if the metre should be long, then four times, neither more nor less, or else there is a false measure.

There are twenty-four concord ties; namely a tie upon every measure of the twenty-four, and those ties are played upon the sharp key.

There are eight key notes . . . and drawings in the place of one another, without more or less.

The primary key notes are begun with the fore finger in the mixt key, and the key note of the thumb and the third finger in its own place, and the middle finger under the burden of the key note, and the little finger under the burden of the lower key note, upon the middle recess note, and the upper recess note.

These are the principal drawings; the cross drawing is with the middle finger over the strings, and the finger in its own place, and the third finger under the burden of the key note, and the little finger in its place, and the upper flat note, and the sharp note of the thumb, and the thumb, and the third finger and the long finger over the strings.

Sometimes the key notes . . . are drawings; and now and then some of the drawings are key notes.⁶

It is now necessary to speak of the keys. . . .

There are five established and warranted keys; and out of those may be formed other keys at pleasure.

One finger of a Crythor . . . keeps three keys; namely the lower key, the sharp key and the flat key; and this is the long finger. The fore finger keeps the intermediate key, and the mixt key; these are the five principal keys.

The thumb of a Crythor executes and diversifies in every key to answer to the four fingers; the third finger and the little finger execute and diversify in every key with respect to their own parts.

Every finger keeps upon itself in the mixt key; the reason of this key being so called, is because there is some of every other key in it.

There are four sorts of flat notes; the flat notes of the mixt key; the flat notes of the intermediate key; the flat notes of the lower key; and the flat notes of the flat key, whence it is so named.

These are the twenty-four canons of instrumental music, all regulated by principle, as they were composed in a congress, before the masters of science . . . in the time of Gruffydd ab [sic] Cynan [ca. A.D. 1100].⁷

⁶ An example of this apparent reversal of functions appears in National Library of Wales MS Williams 316, Part II, p. 5. The listing of these functions, together with the listing which appears in MS Robert ap Huw, is shown in Table IV (next page).

⁷ "Of the Welsh Music," no author cited, Cambrian Register (1795), 387-389.

TABLE IV

THE TWENTY-FOUR MUSICAL MEASURES AS THEY APPEAR IN
MANUSCRIPTS ROBERT AP HUW⁸ AND WILLIAMS 316⁹

MS AP HUW		MS WILLIAMS 316	
Name of Measure	Notation	Notation	Name of Measure
makmwn hir	IIII00001010111100001011	000011110101000011110100	macamwn hir
lorffiniwr	II001011-II001011	0011010000110100	corffiniwr
korsgoloff	II011001011	00100110100	cors golofn
riniart	100-I-10011	10110001100	rhinart
koraldan	II1010010001	000101101110	coraldan
tresi heli	10001110001011	01111000111100	tresi heli
wnsach	IIII0001	000011100	wnsach
kordin tytlach	10110001001111	01100111011000	corti titlas
kor finfaen	10110111011011	0100100	corfinfan
korwrrog	1001011011	0110100100	cwroc
carsi	1000101110001011	01110100	carsi
brath yn yagol	10110100101101001011	01001011010010110	brath yn ysgol
fflangwr gwrgan	1011101100110011	10100010011001100	mlangwr
makmwn byr	II001111	00110000	macamwn byrr
kalchan	II00111101	00110000100	czalchan
brit odidoc	0010-0010-1101-1101	1101110100100010	brut odidoc
trwsgl mawr	00001111-00001011	1111000011110100	trwsgl mawr
titir bach	00110011	00110011	taz bach
mak y mynfaen	00-1100-0011001111	1100111100110000	mak y mynnaen
toddf	01100011	10011100	toddyf
hattvr bach	001011-001011	11001110100100010	nattyf
makydelgi	0111011	10001001000100	macydelgi
alban hyfaidd	1011010001001011	0100101110110100	alban rydderch
alfarch	0000000011111111	1111111100000000	alfarch

⁸Henry Lewis, editor, op. cit., p. 108.

⁹National Library of Wales MS Williams 316, Part II, p. 5.



Plate 3--Harp tablature, British Museum Manuscript
Additional 14905.¹⁰

¹⁰Henry Lewis, editor, op. cit., p. 34.

These instructions seem to date from the pentatonic era, but the modern crwth appeared in Wales about 1500, when pentatonicism was no longer standard. It should also be noted that the "five established and warranted keys" are discussed in the addenda whereas Robert ap Huw notates seven seven-tone scales on page 108 of the manuscript.

The exact age of the "musical measures" is unknown, but the curious mixture of Gaelic and Welsh within the names points toward their antiquity. Although the measures may have been standardized in the high Middle Ages as the addenda stipulates, the principle involved may be older yet.¹²

From this it would seem that the notated material was probably written only for harp, especially since it was both composed by harpists and designed to serve either practical or pedagogic purposes. Therefore, it is almost certainly art music which dates from a time well beyond the emergence

¹² Arnold Dolmetsch believes that the symbols represent tonic and dominant functions, but he is probably in error in applying this description to their earlier function(s) as there is no leading tone and hence no major dominant triad in the pentatonic system. Evidently, Dolmetsch also mistakenly believes that except for Morris's comments all material in the manuscript dates from the same time, namely the eighth century or earlier. It is very doubtful that the music is this old, and the tablature is almost surely not of so great an age. The notation of the measures (Plate 3, above) reveals that at the time of their notation each measure was either a chordally supported arpeggio or some other pattern combining block and broken chords. Further, the music seems to be based on the seven-tone system rather than the pentatonic system. See Arnold Dolmetsch, "Concerning My Recent Discoveries," The Consort, III (June, 1934), 1-11.

of the modern crwth, which became a folk instrument within less than a century after its appearance. It further seems that the instructions for crwth playing were written during the pentatonic era and thus antedate the modern crwth.

Finally, the principle of the twenty-four musical measures seems to have been developed and first applied to the playing of both crwths and harps of the pentatonic period.

The principle, which evidently was carried over into the septonic period only after undergoing alterations, remained a phenomenon of systematized art music.¹³

Tuning the Crwth

In two different documents, Edward Jones describes the manner in which the crwth was customarily tuned.¹⁴ He does not specify, however, whether the description is his own or taken from another source. A translation of this description follows below.

¹³ Regardless of whether or not the system of measures was a peculiarly Celtic device, the symbolic slashes and circles were not. They seem to have had a counterpart in certain seventeenth-century compositions for guitar, according to Johannes Wolf, Handbuch der Notationskunde (Leipzig, 1913-1919), II, 174.

¹⁴ Musical and Poetical Relicks of the Welsh Bards, p. 42, and National Library of Wales MS 168.C, pp. 6-7. Of these two sources, the latter is the more important because it contains a detailed description of the tuning process. The former document provides only a notated illustration.

The Method of Tuning the Crwth

To begin, bring the first string up as high as you can without breaking it, then bring the fifth string up to a pitch five notes under it. Now bring up the sixth string to a pitch five notes below the fifth. It can in this manner be called the latter's bass, or servant.

Tune the second string eight notes lower than the first, thus providing the latter with a bass. Tune the third string five notes below the fifth string and the fourth string eight notes above the third string. In this way the third string functions as a bass to the fourth string, and the crwth is in its natural key, or pitch.¹⁵

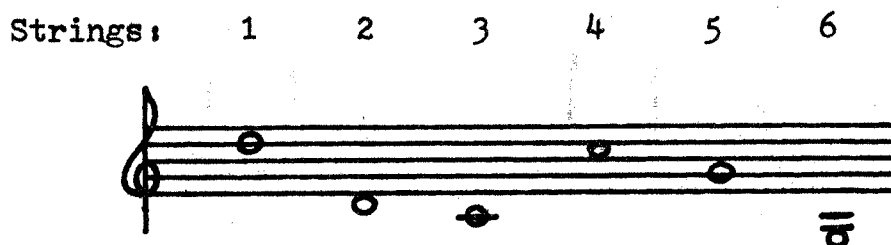
It is interesting to observe that this description contradicts the common opinion that the crwth was tuned to a standard pitch. The practice described above was not peculiar to crwth performance, as may be observed in John Playford's instructions for the tuning of the lyra viol, in which he says:

To begin to tune it, raise or screw up the treble, or first string, as high as it will conveniently bear without breaking, then tune the other to it in this manner.¹⁶

¹⁵ Edward Jones, National Library of Wales MS 168.C, pp. 6-7. English translation by the author of this thesis, with the assistance of Nansi Richards.

¹⁶ John Playford, Musick's Recreation on the Viol, Lyra-Way, second edition (London, 1682), p. iii.

In both documents (see footnote 14, above), Jones illustrates the tuning of the crwth as shown below.



Example 1--Crwth tuning, according to Jones

The tuning, whether invented for the modern crwth or borrowed from some other instrument, was apparently designed for chord playing, a practice which could have been associated with any of the crowds of the fourteenth through sixteenth centuries. Pentatonically tuning a modern crwth according to Jones's directions would probably not work since it would involve too wide a pitch range for the given string lengths, as Table VI (back of next page) shows. The figures in Table VI apply only under conditions which are ideal for a tuning which may be higher than was ever possible. Further, an instrument tuned pentatonically in the manner described above is extremely awkward to play, especially in any way which even remotely conforms to the instructions in Manuscript Robert ap Huw. This seems to strengthen the conclusion that the crwth discussed in Manuscript Robert ap Huw is not the modern one but an older form which is now extinct.

TABLE VI

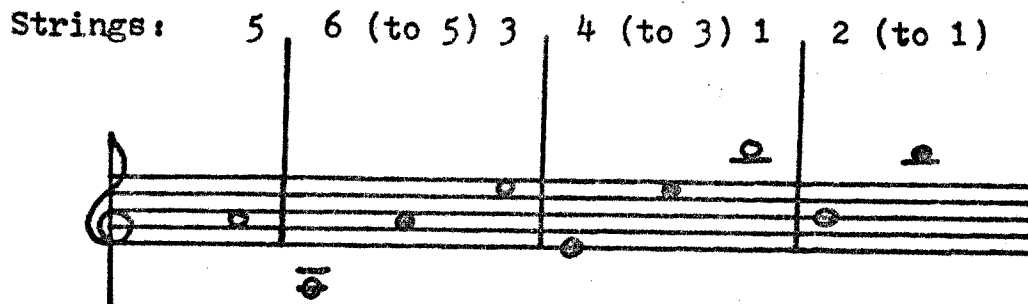
THE HIGHEST POSSIBLE TUNINGS WITHIN THE PENTATONIC GAMUT, DETERMINED ACCORDING
TO JONES'S INSTRUCTIONS, IMPRACTICALLY LOW PITCHES CIRCLED ¹⁷

Modes, or Keys	Tunings						
	(6	5	4	3	2	1)	
Flat	c	g ₁	e ₂	g	c ₁	g ₂	
Lower	c	g ₁	d ₂	g	c ₁	g ₂	
Intermediate	c	g ₁	d ₂	g	c ₁	g ₂	
Mixed	(B)	g ₁	d ₂	g	(b)	g ₂	
Sharp	c	g ₁	d ₂	g	c ₁	g ₂	

17 The maximum high of the first string (to the nearest half step) was determined according to the capacity of a thin gut string with a vibrating length of 25.3 cm., which is 5.00 cm. less than the vibrating length of the first string of the smallest extant specimen of the modern crwth. The vibrating lengths and related physical limitations of the other strings are estimated in light of the structural characteristics of the modern crwth. Physical limitations have been determined by the experiments described on pp. 41-44.

If, in following the instructions, one assumes "eight notes below" (in the case of the relationships of strings one to two, three to four, and five to six) to include the pitch ("note") of the higher of each of the pairs, then there exists an inequality in distance between the members of the pairs. Such a condition does not seem to exist, however, as the second, third, and sixth strings are termed the "basses," or "servants," of the first, fourth, and fifth strings respectively, thus appearing to have identical intervallic relationships to their respective "trebles," or "masters." Identical relationships exist if and only if the descending count begins with the first note below each of the three higher notes under consideration. For this reason, the latter method of counting -- both upward and downward -- was used in the preparation of the above table.

A second tuning of the modern crwth, reported by Bingley, is shown below.



Example 2--Crwth tuning and tuning procedure, according to Bingley.¹⁸

This report seems questionable because of the physical problems inherent in tuning the first string to such a high pitch, but tuning the corresponding central strings in fifths greatly facilitates the playing of the instrument. For this reason, Bingley's report must not be entirely dismissed.¹⁹

¹⁸William Bingley, op. cit., p. 283.

¹⁹A report of the results of both tuning and playing the instrument in the manner which Bingley describes can be found on pp. 49-51 of this document.

Playing Techniques, As Determined by Experimentation

Tuning

The first experiment was performed to investigate the accuracy of Bingley's report of how the crwth was tuned. It seemed unlikely that a string the length of those on the crwth could -- or would -- have been tuned to a pitch of b_2 . The experiment was carried out as follows:

1. The bridge was set as Bingley describes -- with its right foot above rather than below the right soundhole.
2. The vibrating length of the first string was reduced to 25.3 cm.²⁰ by inserting a shim between the central strings and the fingerboard. The vibrating lengths of the other central strings were thus reduced proportionally.
3. The tension of the first string was brought up very gradually, with frequent checks being made of pitch level. When the string, tailpiece or retainer either parted or pulled free, the maximum high was assumed to be the last pitch recorded before breakage.

²⁰The first string of the Heyward instrument (p. 158) has a vibrating length of 30.3 cm. when the bridge is set straight across the belly and about 27.5 cm. with the bridge positioned as Bingley describes. The latter measurement is about 2.2 cm. greater than the length of the experimental string, and the Heyward crwth is the smallest extant specimen.

The experiment was performed five times with each of several different types of string. The highest pitch attained in the case of each type is shown in Table VII. One could conclude that if a gut string were sufficiently short and thin it could be tuned to b_2 , but its sound would be covered by those of the other strings. The use of proportionally thin second through fourth strings causes the sound to be not only insipid but also marked by much pitch distortion. Further, tuning the first string to b_2 would extend the instrument's upper range very little because the string, when drawn adequately tight, produces only a very thin sound at pitch levels above about $f_3^\#$. Thus it seems that tuning the first string to b_2 is not only impossible but also pointless.

While it is true that International Concert Pitch was not an accepted standard in ca. 1800, only "Ideal Church Lowest Pitch" ($a_1 = 370$ hz.)²¹ would have allowed what is now $g_2^\#$ to have been either equal to or higher than b_2 .²²

The most common explanation of Bingley's report is that he erred one octave in his notation of the pitches of the

²¹ Alexander Ellis, "The History of Musical Pitch in Europe," Section H of the appendix in Hermann L.F. von Helmholtz, On the Sensations of Tone as a Physiological Basis of the Theory of Music, second English edition, translated by Alexander Ellis (New York, 1954), p. 495.

²² 370 hz. seems to have been a theoretical standard only. A frequency of approximately 420 hz. appears to have been the lowest pitch standard in Britain about 1800. (Ibid., p. 495-ff.)

central strings,²³ but if their pitches are lowered an octave, the second and fourth strings are so loose that bowing them produces a very weak sound, and pitch distortion is unavoidable.

A more plausible hypothesis would be that Bingley correctly heard the pitch relationships of the central strings but either erred in his estimation of pitch levels or had more concern for a visually balanced example than for correct representation of pitches and hence used an arbitrary notation. It is altogether possible that the newer tuning, like the classical tuning, was based only upon pitch relationships and limited by string capacity. Further, the bourdons may have been tuned a fourth rather than a fifth below the second pair of central strings, or an octave below the first pair.

Tuning and Left Hand Technique

Music of a purely melodic, homophonic, or strictly harmonic texture can be played on the crwth. Both texture and fingering are determined mainly by the tuning and to a lesser degree by bridge design.

Either tuning is suitable for the playing of multiple stops, but the classical tuning is practical only in connection with strictly chordal playing. It can be used

²³Francis W. Galpin, Old English Instruments of Music (London, 1932), p. 77.

TABLE VII

CAPACITIES OF VARIOUS TYPES AND SIZES OF STRINGS TESTED

Application	Material	Approximate Thickness	Maximum High	Comments
violin	gut	15 μ	$\epsilon_2^{\#}$	broke below bridge
guitar (portion)	steel	11 μ	$a_2^{\#}$	broke above tailpiece
angling line	nylon	16 μ	a_2	broke at tailpiece
		20 μ	f_2	tailpiece broke
		10 μ	$b_2^{\#}$	tone too thin
utility wire	steel	10 μ	b_2	tone too thin
		18 μ	ϵ_2	retainer pulled out of tailpiece
viol	gut	17 μ	$f_2^{\#}$	string pulled out of tailpiece

for the playing of melodies on either of the outer central strings alone if bridge design permits, on either of the outer strings against the drone of the adjacent string, or vice-versa. Countermelodies can also be played on any string. All these ways of melodic playing, however, are quite limited when the strings are tuned in seconds because of the way in which the fingers are confined to either a single string or a single pair or strings. The playing of melodies whose total compasses exceed a sixth necessitates one of two awkward maneuvers: either shifting up the fingerboard or shifting from one string or pair of strings to another. Both frequency and necessary speed of execution are greatly increased whenever the melody is disjunct. Many passages from Welsh dance tunes are almost impossible to play on an instrument tuned in seconds. Example 3 (next page) shows the necessary fingering and shifts used in playing the "Llanover Reel" on an

instrument tuned in seconds. The example shows the fingering of the melody only; stopping the other strings to produce harmonizing pitches would be even more nearly impossible than the procedure illustrated below.

The musical score consists of eight staves of music in G major (one sharp). Each staff includes a melody line with various fingering and shift indications written below it. The first staff includes the following text: Finger 3, String 1, Position 1. The notation includes notes, rests, and bar lines. The fingering and shift indications are as follows:

- Staff 1: 2 1 0 4 3 2 1 (3)
- Staff 2: 3 2 1 0 3 4 0 1 2 1 0 (3) (1) (1) (1) (IV)
- Staff 3: 3 2 1 0 4 3 2 1 (0) (IV) (1)
- Staff 4: 0 4 2 0 4 1 0 4 1 0 (3) (1) (1) (IV) (I) (IV) (II) (I) (II) (I) (IV)
- Staff 5: 3 1 0 1 3 2 3* 1 0 1 3* 4 (3) (1) (1) (IV) (I) (II) (IV) (I) (I) (I)
- Staff 6: 3 1 0 1 3 2 1 0 4 0 1 2 (3) (1) (1) (IV) (I) (II) (I) (I) (I)
- Staff 7: 3 1 0 1 3 2 3* 1 0 1 3* 2 (0) (IV) (1) (1) (IV) (I) (I) (I) (I) (I)
- Staff 8: 0 4 3 2 3 2 1 0 0 2 0 (IV) (I) (I) (I) (I) (I) (I) (I) (I) (I)

Example 3--Melody of "Llanover Reel," with fingering and shift indications; crwth tuned (l.-r.) d-d₁-g₁-g-a-a₁.

Although the traditional tuning is not suited to melodic functions, it lends itself quite well to the playing of chords. When the strings are tuned in seconds, the left hand is in the proper position to play a large number of chords at any point along the fingerboard. Changing chords in most instances requires only a minimal amount of hand and finger motion. Tables VIII - X below show three progressions played on an instrument tuned in the classical manner.

TABLE VIII

I-IV-I-V₇-I PROGRESSION, CENTRAL STRINGSTUNED $c_2-c_1-d_1-d_2$

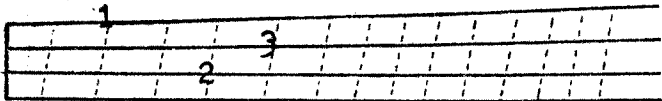
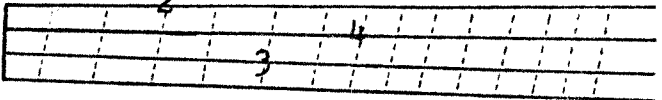
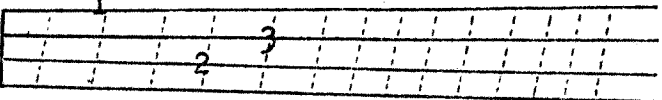
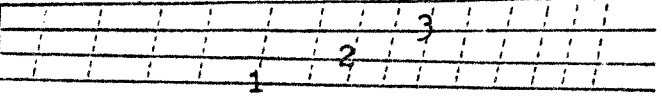
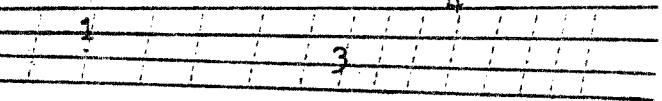
Nodes / Fingers	Spellings
	$c_2 e_1 g_1 e_2$
	$c_2 f_1 a_1 f_2$
	$c_2 e_1 g_1 e_2$
	$f_2 g_1 b_1 d_2$
	$c_2 g_1 e_1 c_3$

TABLE IX

I-IV-I-V₇-I PROGRESSION, CENTRAL STRINGSTUNED c₂-c₁-d₁-d₂

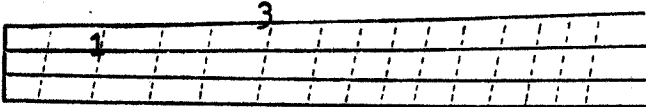
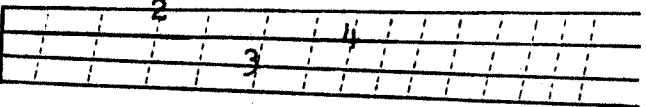
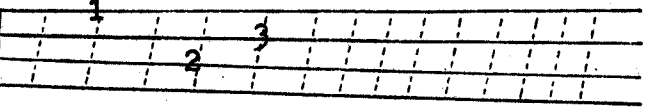
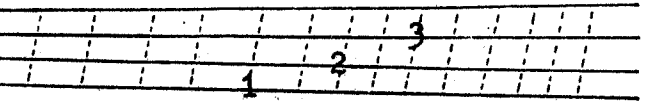
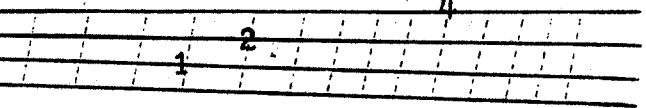
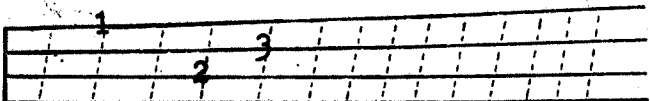
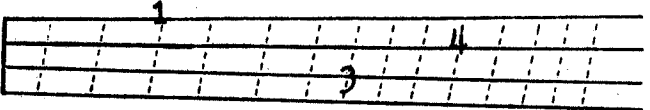
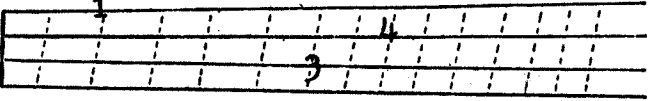
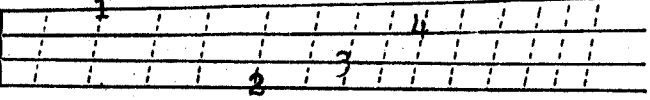
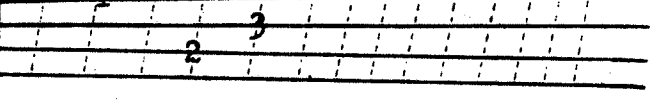
Nodes / Fingers	Spellings
	c ₂ c ₁ e ₁ g ₂
	c ₂ f ₁ a ₁ f ₂
	c ₂ e ₁ g ₁ e ₂
	f ₂ g ₁ b ₁ d ₂
	c ₂ e ₁ g ₁ c ₃

TABLE X

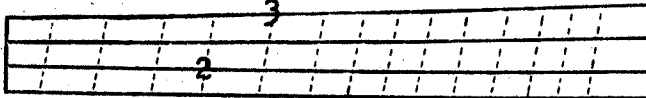
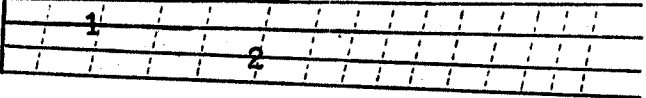
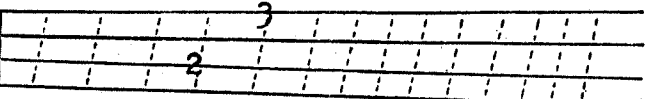
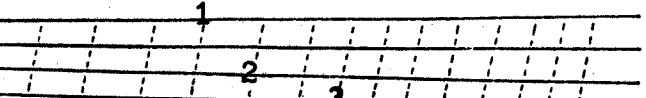
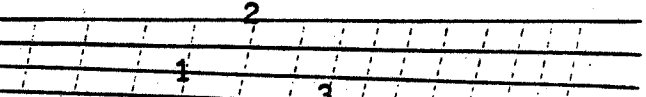
I-ii₇-I-iii₉-I PROGRESSION, CENTRAL STRINGSTUNED c₂-c₁-d₁-d₂

Nodes / Fingers	Spellings
	c ₂ e ₁ g ₁ e ₂
	c ₂ f ₁ a ₁ d ₂
	c ₂ g ₁ c ₂ e ₂
	f ₂ g ₁ b ₁ e ₂
	c ₂ e ₁ g ₁ e ₂

Although Bingley's report of specific pitches is questionable, it is credible with regard to pitch relationships. Tuning the related central strings in fifths is a great improvement over the classical tuning. The new method is as well suited to the playing of chords as is the old one (Table XI), and unlike the old procedure, it enables one to play melodies (Example 4). The tuning in fifths, which may

TABLE XI

I-IV-I-V₇-I PROGRESSION, CENTRAL STRINGSTUNED g-g₁-d₁-d₂

Nodes / Fingers	Spellings
	g b ₁ d ₁ g ₂
	g c ₂ e ₁ g ₁
	g b ₁ d ₁ g ₂
	d ₁ c ₂ d ₁ f ₂ [#]
	d ₁ b ₁ d ₁ g ₂

Finger 0 3 2 1 1 0 3 2 (0)
 String I III I III (I)
 Position (first position throughout)

0 3 2 1 1 0 3 2 (0)
 I III I III (I)

0 3 2 1 2 3 1 2 3 2 1 0 (0)
 I III II III (I)

0 3 2 1 1 0 3 2 (0)
 I III I III (I)

0 1 3 0 2 3 1 2 2 0 (0)
 III I III II III II III (I)

0 2 0 2 0 1 3 0 3 1 (0)
 I III I I III I (I)

0 2 0 2 0 3 1 2 1 3 (0)
 I III I III II III (I)

0 2 0 2 0 1 3 0 3 1 (0)
 I III I III I (III)

0 3 2 1 0 3 2 1 0 2 0
 III I III (I)

Example 4--Melody of "Llanover Reel," with fingering and shift indications; crwth tuned d-d₁-g-g₁-d₁-d₂.

be an adaptation of violin tuning, makes the crwth no longer just an instrument of accompaniment but one with a wide variety of applications including melodic and homophonic solo playing (Recorded Examples 1-3, 5-7, 9, 11-13-b), ensemble playing (Recorded Examples 4, 10, 13-c), and provision of chordal accompaniment with an obbligate line (Recorded Example 8). Tuning the paired strings in octaves makes the crwth superior to the violin for the playing of chords as it necessitates less multiple stopping than would be needed if the strings were tuned in consecutive fifths.

Bridge Design

If, as many have assumed, the upper edge of the crwth's bridge were flat, the bowing of either of the inner central strings alone would be impossible. The standard bridge, however, appears to have been slightly convex, and it seems that an even more convex bridge was used in some cases late in the instrument's life. Table XII shows the ways in which the instrument can be effectively played when equipped with bridges of different designs.

Bridge Placement and Left Hand Technique

Much has heretofore been said about the supposedly significant relationship between bridge position and left hand technique. It is likely that the bridge was set obliquely to alleviate problems associated with bowing and tone production rather than, as Galpin postulates, to

TABLE XII

EASE OF BOWING, ACCORDING TO
CURVATURE OF BRIDGE

Strings	Upper Edge		
	flat	standard	extremely convex
I	2	2	1
II	0	1	3
III	0	1	3
IV	1	1	0
I, II	2	2	2
II, III	0	2	4
III, IV	1	2	1
I-III	3	3	0
II-IV	2	3	0
I-IV	4	4	0
Degree of Ease *			

*Key to numbers:

0 = impossible

1 = possible

2 = practical

3 = easy

4 = ideal

facilitate the fingering of chords.²⁴ Galpin's hypothesis fails to account for the theoretically infinite number of bridge positions between the traditional one and that described by Bingley. The hypothesis further loses credibility in view of the way in which the crwth appears to have changed its role of an exclusively chordal instrument.

Experiments show that the different bridge positions slightly influence the fingering of chords, but the differences are rarely great. Some chords are actually easier to play when the bridge is moved out of the traditional position. The relative ease of fingering with any given bridge position varies according to the chord. In no case does the finger position vary more than about a centimeter when the bridge is moved (Table XIII, next page).

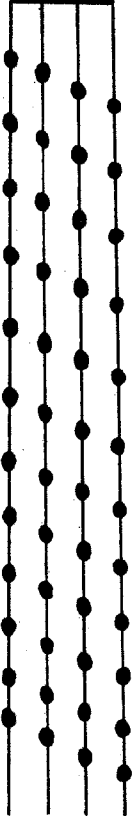
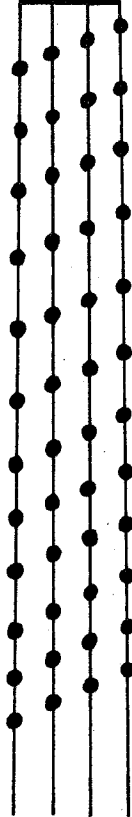
Holding the Instrument

Reported methods of holding the crwth include ¹⁾ flat on its back, resting upon either a bench or a table (Plate 4); ²⁾ at the neck, like a violin (Plate 5); ³⁾ with its lower end against the player's upper chest and its head either near or on his left knee (Plate 6); ⁴⁾ with its lower end either on or between the player's knees and its finger-board pointing toward his throat or chin (Plate 7); ⁵⁾ with its lower end loosely held between the player's knees and the

²⁴ Francis W. Galpin, Old English Instruments of Music, p. 77.

TABLE XIII

BRIDGE POSITIONS AND NODE LOCATIONS

Traditional Position	Pitches	Position Described By Bingley
	open: $c_2 c_1 d_1 d_2$ stopped: $c_2^\# c_1^\# d_1^\# d_2^\#$ $d_2 d_1 e_1 e_2$ $d_2^\# d_1^\# f_1 f_2$ $e_2 e_1 f_1^\# f_2^\#$ $f_2 f_1 g_1 g_2$ $f_2^\# f_1^\# g_1^\# g_2^\#$ $g_2 g_1 a_1 a_2$ $g_2^\# g_1^\# a_1^\# a_2^\#$ $a_2 a_1 b_1 b_2$ $a_2^\# a_1^\# c_2 c_3$ $b_2 b_1 c_2^\# c_3^\#$ $c_3 c_2 d_2 d_3$	

fingerboard pointing toward his left shoulder (Plate 8); and
 6) against the player's body and suspended by a neck strap
 (Plate 9).



Plate 4--Crwth laid on a table



Plate 5--Crwth held like a violin



Plate 6--Crwth held with lower end against chest and upper end on knees.



Plate 7--Crwth held in upright vertical position



Plate 8--Crwth held in upright oblique position



Plate 9--Crwth held with a neck strap

The practice of laying the instrument flat on a table is reported by Engel.

No doubt the flat back was later adopted . . . when it was found more convenient to place the instrument on a table instead of holding it in the hand.²⁵

There is, however, little support of Engel's supposition. Placing the instrument on a table creates a serious physical problem. The sloping back of the yoke allows the lower end of the instrument to rise when pressure is applied to the fingerboard, and application of the bow causes the instrument to tip back and forth. Both rapid fingering and bowing are impractical even when the instrument is held on its back across the player's knees to eliminate rocking.

Baines reports the practice of holding the crwth "up like a fiddle,"²⁶ which may have been tried and abandoned. The most pressing problem is that the absence of waisted sides forces the right forearm to remain nearly parallel to the instrument's belly, necessitating awkward and tiring bowing strokes.

Certain iconographic representations show fourteenth- and fifteenth-century crowds held between the neck and knees. This method was workable until bourdons were added.

²⁵Carl Engel, Researches into the Early History of the Violin Family, p. 29.

²⁶Anthony Baines, "Ancient and Folk Backgrounds," p. 220.

Although the practice seems to have never completely disappeared,²⁷ it fell more and more from favor as players found it difficult to simultaneously pluck the bourdons and stop the central strings with the instrument's upper end pointing downward.

The vertical upright position makes bowing rather awkward, makes the bourdons difficult to work, causes the left wrist and forearm to tire quickly, and limits the movement of the left fingers.

The problem is alleviated by swinging the top of the instrument to the player's left and rotating the instrument slightly.²⁸ There is now no need to tip the left hand backward to gain access to the bourdons, and one can thus play rapid, intricate passages without tiring his left wrist and forearm.

Suspension from the neck with a strap makes the instrument slightly more difficult to play than does the former method because access to the bourdons is to a great degree limited by the proximity of the instrument to the body of the player. Otherwise, the relationship of the instrument to its player is about the same as in the preceding case.

²⁷Gerald Hayes, "Notes on the Crwth," p. 452. Meredith Morris also reports that crowd holding technique was used in Pembrokeshire as late as ca. 1849 ("The Crwth," p. 169).

²⁸Nansi Richards reports that this was said to have been the most commonly used playing position.

Use of the neck strap, which Bingley reports having observed,²⁹ enables the player to stand or even walk around while playing.

Holding Technique, Bowing and Bridge Position

Experimentation with different methods of holding the crwth evinced the probable reason for the curious way of positioning the bridge. The maximum ease of grasping the bow end-on and drawing it diagonally arises from the ways in which the instrument is best held (Plates 8 and 9), which in turn determine the best way of setting the bridge. A bridge set straight across would frequently be in the way of the bow whenever the instrument was held across the body. Bowing an instrument whose bridge is set as Bingley describes is easiest if a palm-downward grip is employed.

Bridge Position and Tone

A further advantage of the traditional bridge position is the way in which it affords a wide range of dynamic level and tone quality. The results of bowing with the bridge set according to Bingley are similar to those obtained with the traditional arrangement, but a greater difficulty of bow control usually results.

²⁹William Bingley, A Tour Round North Wales, p. 283.

CHAPTER IV

A SHORT HISTORY OF THE CRWTH IN PERFORMANCE

The Bardic Crwth

Numerous Greek and Roman chroniclers mention the use of the lyre by Celtic bards, and about A.D. 600, Venantius Fortunatus, Bishop of Poitiers, Brittany, wrote:

Romanusque lyra plaudat tibi,
Barbarus harpa,
Groecus achilliaca,
Chrotta Brittanna canat.¹

This poem is the earliest extant evidence of Celtic lyres which differed from other lyres in name (probably crottach) and perhaps structure, but it does not prove that the modern crwth dates from at least the seventh century, that the bow was known and used in Europe at this time, or that the bow was invented either in Britain or by the Celts.

Another point of frequent confusion is the body of literary references to instruments called crwths. The date of

¹Henry Davey, History of English Music (London, n.d.), p. 7.
Translation:

[Let the] Romans praise Thee [with the] lyre,
[The] Barbarians [with the] harp,
[The] Greeks [with the instrument of Achilles],
[And let the] chrotta [crottach] [of] Brittany
sing.

the origin of crwth is uncertain, but references are numerous from the eleventh century and thereafter.²

Attention is also given to crwths in the Gruffyddic Law, a sentence of which reads, " A singer should know how to tune a harp or a crwth" ³ There are similar references to crots, cruits and timpani in Irish documents from the same period.

The bow appears to have been applied to some of these twelfth-century instruments, but there is no definite proof that the modern crwth existed at this time. There were, however, several instruments with six strings and at least one with four central and two tangential strings (p. 142).

Minstrels' Instruments

By the beginning of the fourteenth century, three-, four- and six-stringed crowds, apparently imported from the continent,⁴ were established as one class of lesser instruments among the British minstrels.⁵

²Hortense Panum, The Stringed Instruments of the Middle Ages, translated, revised and edited by Jeffrey Pulver (London, n.d.), p. 243. By the high Middle Ages, a clear hierarchical distinction was being drawn between three- and six-stringed crwths.

³Henry Davey, op. cit., p. 43.

⁴On the continent, chrotta, krote, rotta and crouthe were commonly applied to these instruments.

⁵Hence the surname, Crowder.

Perhaps the most famous and certainly the best preserved representation of the fourteenth-century three-stringed crowd is John of Northampton's wall painting in the Chapter House of Westminster Abbey, London (Plate 10). One of the two instruments shown appears to have three strings, and the other has no strings showing. The icon is part of a series of paintings on the interior wall of the room's northwestern bay. As a unit, the paintings comprise a representation of the Apocalypse. The figures holding the crowds are two of the twenty-four elders. These representations, which date from about 1400, are important in the reconstruction of the final, climactic stage of the evolution of the modern crwth.⁶

Meredith Morris reports a representation of a four-stringed instrument with bow on the "Stone Music Gallery"⁷ in Exeter Cathedral (Figure 5), but a search failed to uncover any such icon. The cathedral librarian reports that there seems to be no sculpture of this description among the cathedral's many ornaments. Although it is logical to assign an instrument such as Morris illustrates to the early

⁶The significance of each pertinent icon is discussed at length in Chapters V and VI.

⁷There is no "Stone Music Gallery" in Exeter Cathedral; Morris probably meant the Minstrels' Gallery.

fifteenth century, the dating is incongruous with the facts pertaining to the cathedral's construction.⁸

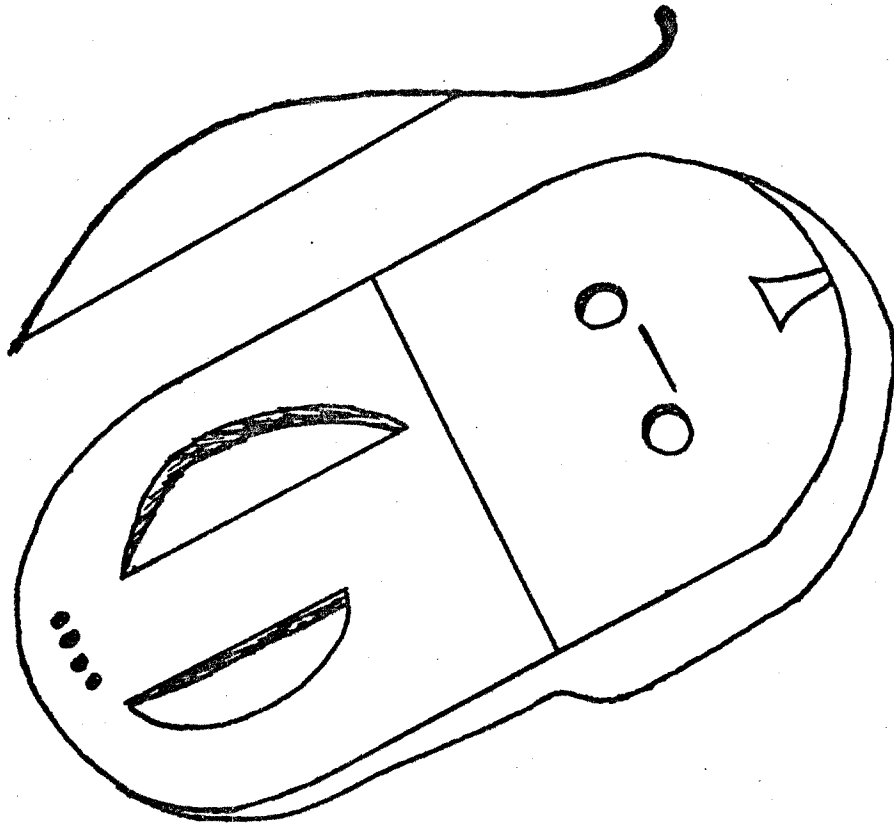


Fig. 5--Sculpture of a four-stringed crowd with bow, reported by Morris to be in Exeter Cathedral (ca. 1420).⁹

⁸ Morris fixes the date of the sculpture at ca. 1420 (see below), but Exeter underwent continuous construction from ca. 1290 to ca. 1380, and other than a few ornaments around some of the later tombs, no further additions or alterations were made until the sixteenth century. The cathedral sustained some bomb damage during World War II, but the only serious damage was that done to an unadorned, subsidiary chapel. Finally, the several catalogs of the cathedral's ornaments do not list any crowds or crwths whose reproductions are no longer extant.

⁹ Meredith Morris, op. cit., p. 94.

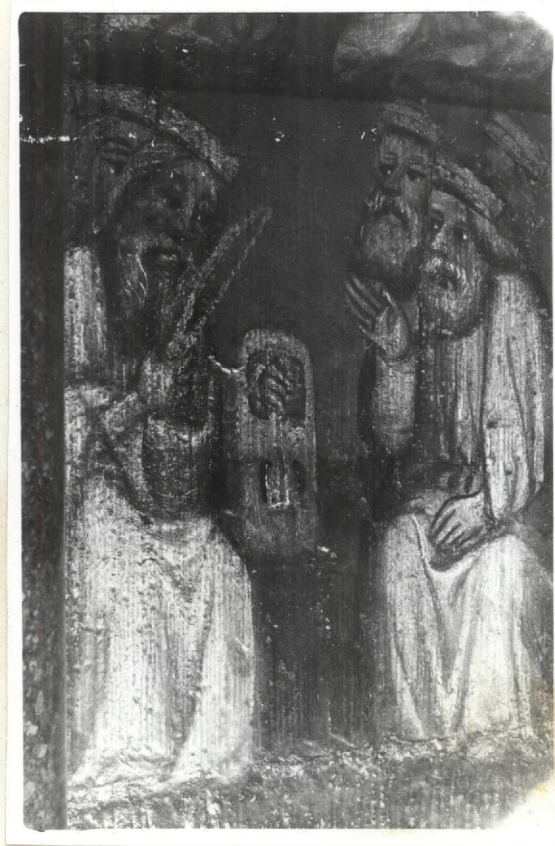


Plate 10--Three-stringed crowd; wall painting in the Chapter House, Westminster Abbey, London (ca. 1400).¹⁰

¹⁰Photography and use of photograph by permission of the Secretary, Lambeth Bridge House, London.

The best known representation of a four-stringed crowd is a cast made from the seal of Roger Wade the Crowder (Plate 11).¹¹ The seal, which was discovered in the nineteenth century by Edward Heron-Allen, was fastened to the defeasance of a bond (Plate 12).



Plate 11--Plaster cast of the seal of Roger Wade the Crowder (seal, ca. 1316).¹²

¹¹British Museum Seal lxxxvii.44.

¹²Mary Remnant, "Rebec, Fiddle and Crowd in England," Proceedings of the Royal Musical Association, XCV (1968-1969), Plate II-a, facing p. 21.

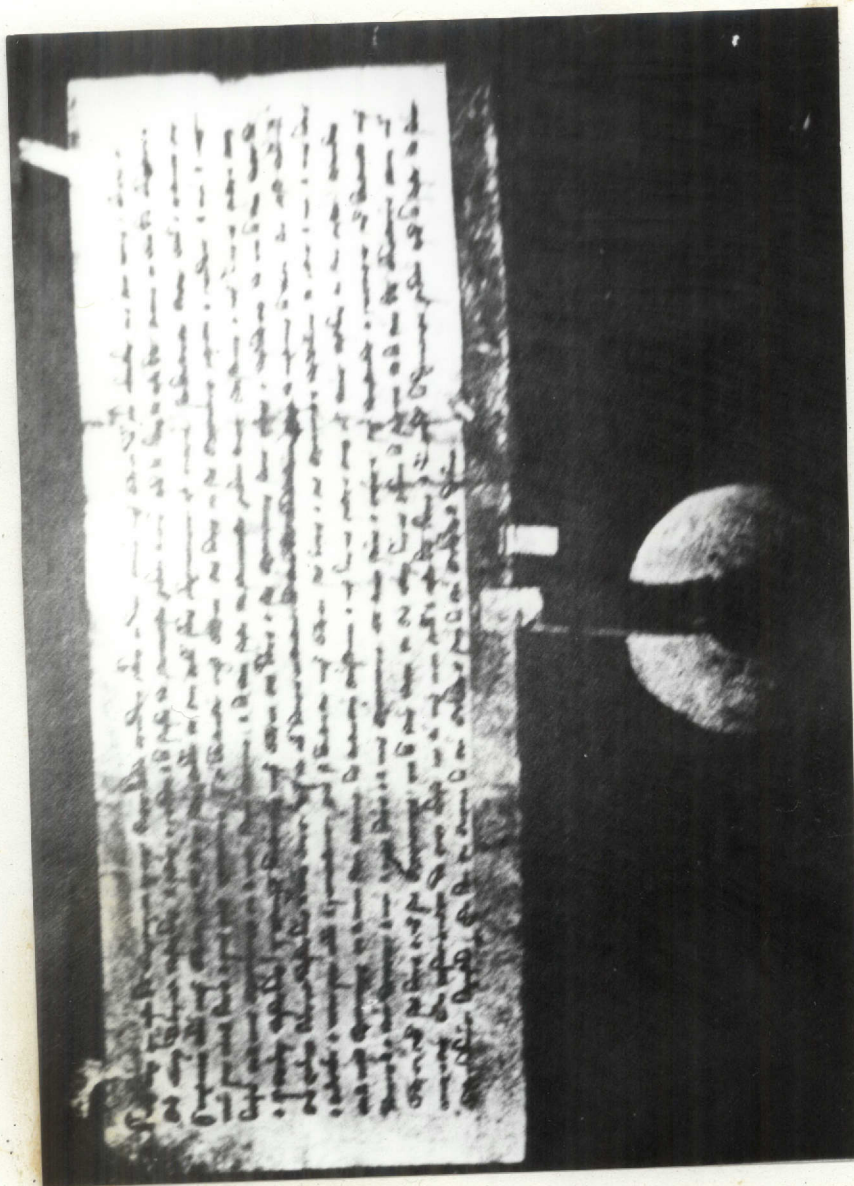


Plate 12---Defeasance of a bond by Roger Wade the Crowder (1316)¹³

¹³ Photograph courtesy of the County Borough of Warrington Museum and Art Gallery.

The four-stringed crowd survived perhaps into the sixteenth century. There is a sculptural representation of a four-stringed instrument among the ornaments on the ceiling of the nave in the Collegiate Church of Saint Mary the Virgin, Shrewsbury, Shropshire (Figure 6). This icon dates from 1471.

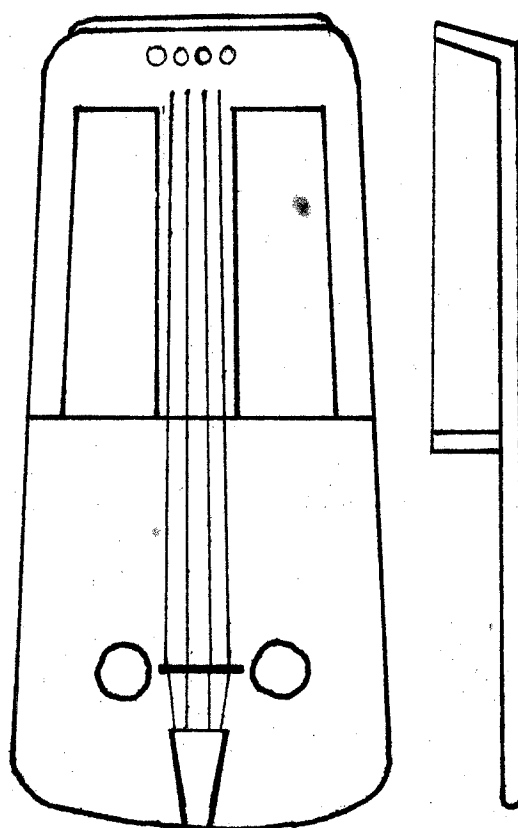


Fig. 6--Four-stringed crowd with bow; Collegiate Church of Saint Mary the Virgin, Shrewsbury.¹⁴

¹⁴It is regretted that technical difficulties rendered impossible the satisfactory photographing of this icon.

A crowd with six centrally located strings is shown in a misericord sculpture in Worcester Cathedral (Plates 13 and 14).



Plate 13--Six-stringed crowd; misericord sculpture, Worcester Cathedral (1397).¹⁵

¹⁵Photography and use of photograph by permission of the Vicar, Worcester Cathedral.



Plate 14--Worcester sculpture, detail of instrument¹⁶

¹⁶Ibid.

The Decline of Minstrelsy and
the Crowd's Change of Status

The deterioration of minstrelsy was a slow process which extended over a period of more than three hundred years. In a broad sense, the basis of the dissolution was twofold: new currents in music and poetry together with changes in the attitude of society served to force the minstrel more and more into the background.

The late fourteenth century saw an accelerated growth of the spirit which had given birth to the Magna Carta in 1215. The mood of rebellion was particularly rife among the minstrels, who felt themselves discriminated against by hostile authorities. Armed revolt broke out in East Anglia in 1381. This "Peasants' Revolt," led by Walter ("Wat") Tyler, was suppressed, but not before the rebels got into London and killed several important persons, among them the Archbishop of Canterbury. Resultant statutes restricted the common people in general and the minstrels in particular. Suppression of the minstrel helped bring about the decline of both his art and his instruments. By the early fifteenth century, the crowd was only rarely used outside of southwestern Britain.

Even more significant was the Welsh uprising (1400-1408) under Owen Glyndwr. Whereas the minstrels had played only a minor role in the Peasants' Revolt, they figured substantially in the Welsh uprising, inspiring and inciting

the Welsh in the manner of the old bards. When the rebellion was crushed, punitive actions were sufficiently harsh to doom minstrelsy. The most important statute, 4 Henry IV, c. 27, prohibited the support of "jesters, rhymers, minstrels, and other vagabonds."¹⁷ The law was not enforced effectively, and minstrelsy was not wiped out at once. Enforcement was sufficient to make it difficult for the minstrel to earn a living, however, and many minstrels entered other fields. This process expedited the absorption of some elements of minstrelsy by the Welsh peasant culture.

The Modern Instrument

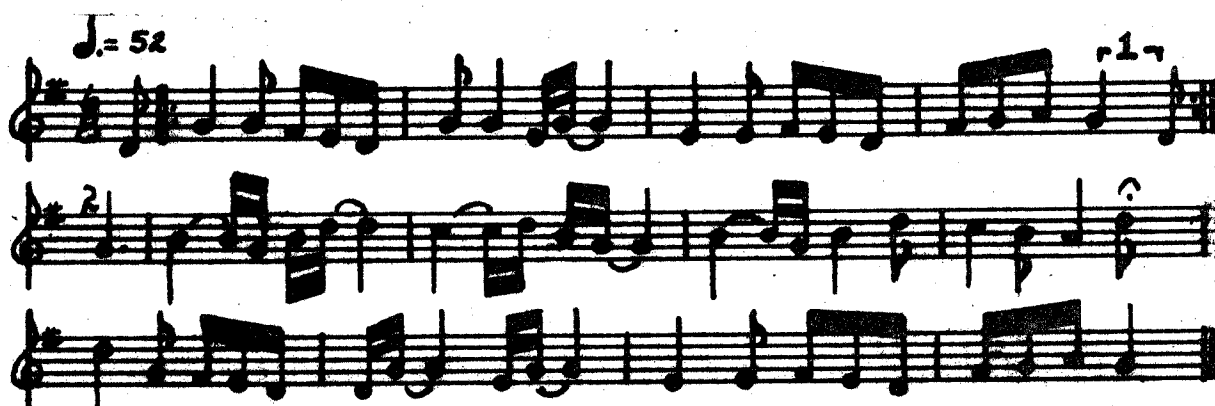
By the late sixteenth century, the minstrel was practically indistinguishable from the ballad singer, the epic was now the folk ballad, and the crowd, which had once accompanied the courtly dance and the minstrel's song, was the crwth, a familiar sight both at the country dance and in the hands of the ballad singer.

Folksong, Ballad, Folk Dance, and the Crwth

Folksong.--Folksinging was usually unaccompanied, but one cannot say with certainty that instruments, among them the crwth, were never used in connection with singing.

¹⁷William Chappell, The Ballad Literature and Popular Music of the Olden Time (London, 1855-1859), I, 39.

Most Welsh folksongs were anonymous creations, and few of them were notated and widely disseminated until fairly recent times.¹⁸ The most common of the folksongs were concerned with the joys and sorrows of love (Example 5). Welsh love songs exhibit much plaintive hiraeth, a "perennially Celtic alloy of revolt against fact and yearning for the unattainable."¹⁹ Other types of song include work songs, sea chanties (Examples 6 and 7, Recorded Example 8), singing games, dialogue songs and lullabies (Example 8).



Example 5--"Y Ferch o Blwy Penderyn" ("The Maiden of Penderyn").²⁰

¹⁸W.S. Gwynn Williams, "Traditional Music," Music in Wales, edited by Peter Crossley-Holland (London, 1948), p. 23. Reliable work in the notation of Welsh folksong dates from the early years of the twentieth century.

¹⁹Peter Crossley-Holland, "Welsh Folk Music," Grove's Dictionary of Music and Musicians, fifth edition, edited by Eric Blom (London, 1954), III, 404.

²⁰Meredydd Evans and others, Traditional Welsh Songs (Los Angeles, n.d.), record side 1, band 2.



Example 6--"Our Gallant Ship"²¹

²¹Peter Kennedy and Alan Lomax, collectors, Sailors and Servingmaids, Vol. VI of The Folksongs of Britain, 8 volumes (New York, n.d.), record side 1, band 4.



Example 7--"Harbwr Corc" ("Cork Harbor")²²



Example 8--"Si Hei Iwli" ("Lullaby")²³

²²Meredydd Evans and others, op. cit., side 1, band 11.

²³Ibid., side 2, band 11.

The ballad.--Newspaper publication and circulation did not become common in Wales until the nineteenth century. News was disseminated in the streets, at market places, and at fairs by ballad singers in continuation of a practice that began in northern Wales during the sixteenth century. Ballad singers frequently accompanied themselves with such instruments of low status as the rebec.²⁴ The crwth was another member of this lower class of instruments, and since its era roughly coincides with that of the Welsh ballad singer, it was probably used by this figure in some cases.

Subjects treated included anything worthy of contemporary headlines: politics, murders, and assorted tribulations. Drunken carousings were also reported as were accounts of births, deaths, marriages, estrangements, and the practice of witchcraft.²⁵ One item in this last category, the mysterious disappearance of Ned Puw, was such a favorite subject that it ultimately became a folk legend, surviving long after Puw's demise was no longer news. Many tunes were devised to accompany the numerous variants of the story of how poor Ned came to an untimely end in his foolish attempt to win a wager that he could dance to within five paces of a haunted cave while accompanying himself on his crwth (Examples 9 and 10; also Recorded Example 11).

²⁴Peter Crossley-Holland, "Welsh Folk Music," p. 404.

²⁵Ibid.



Example 9--"Pfarwel, Ned Puw"²⁶

²⁶ Adapted from T. Gwynn Jones, "The Carols and Ballads," Welsh Folk Song Society Journal, II-4 (1925), 234-235.

Example 9--ContinuedExample 10--"Ffarwel, Ned Puw"²⁷²⁷ Ibid., 238-239.

Shipwrecks were common subjects of ballads in coastal regions. On some occasions, the ballad fulfilled the role of the "wanted" poster. More than one poacher was caught by a farmer who had heard in the village a ballad about how within the past fortnight several farmers in the area had been relieved of some of their livestock.²⁸



Example 11--"Diniweidrwydd" ("Innocence")²⁹



Example 12--Ballad tune (no name cited)

²⁸This information, together with the two ballad tunes shown above, was communicated by Ioan Evans, August, 1972.

²⁹Meredydd Evans gives "Y Bachgen Main" as an alternate title; letter to the author, April 12, 1973.

Folk dance.--Although there is perhaps some question regarding the extent of the crwth's use in connection with singing, there seems to be none regarding its use in the accompaniment of dancing. A common instrumental ensemble was composed of crwth, telyn, and pibgorn: a small, single-reed aerophone. The ensemble was often augmented by voices, which provided nonsense syllables to the beat of the music. The rhythmic pulse was also stressed on many occasions by the clapping of hands and the stamping of feet. A sixteenth-century treatise on dance music concludes, "Thus ends the class, called the hand, foot, and ear knowledge of instrumental music."³⁰ This statement, together with the absence of any notated Welsh dance music prior to the time of Playford and Walsh, seems to point toward improvisation.

Welsh folk dance is divisible into three large categories: ceremonial group dances, informal group dances, and solo dances.

Ceremonial dancing often culminated the ritual connected with holiday seasons. One of the most significant of these rituals centered around the change of seasons from spring to summer. The following is a description of part of the ceremony associated with May dancing.

³⁰Peter Crossley-Holland, "Welsh Folk Music," p. 402.

About . . . a week previous to the festival, a collection is made of the gayest ribbons that can be procured. Each lad resorts to his favourite lass, who gives him the best she possesses, and uses her utmost interest . . . to obtain a loan of whatever may be requisite to supply the deficiency. Her next care is to decorate a new white shirt of fine linen. This is the principal part of her lover's dress. . . .

During this time the chosen garland-bearer is also busily employed. Accompanied by one from among the intended dancers . . . he goes from house to house . . . begging the loan of whatever . . . utensils . . . are likely to make a brilliant display. . . .

When May-day morn arrives, the group of dancers assemble at their rendezvous -- the village tavern. From thence . . . the rustic procession sets forth, accompanied by the ringing of bells.

They march . . . in pairs, headed by the Cadi. After him follows the garland-bearer, then the fiddler The Cadi varies his station . . . brandishes a ladle, and assails every passenger with comic eloquence . . . for a customary and expected donation.

When they arrive at a farmhouse, they take up their ground on the best station for dancing. The garland-bearer takes his stand, the [crwth] strikes up an old national tune . . . and the dancers move forward . . . in the order of procession; and at each turn of the tune throw up their white handkerchiefs with a shout, and . . . retrace their steps, repeating the same manoeuvre until the tune is once played. The music and dancing then vary into a reel, which is succeeded by another dance.

During the whole of this time, the buffoonery of the Cadi is exhibited without intermission. He assails the inmates of the house for money, and when this is obtained he bows or curtsies his thanks, and the procession moves off to the next farmhouse. . . .

When they return to the resident village in the evening, the bells ring merrily to announce their arrival. The money collected . . . is appropriated to defray . . . expenses . . . and the remainder is spent in jovial festivity.³¹

³¹Letter signed, "H.T.B.," April 14, 1825; published in William Hone, Everyday Book and Table Book (London, 1838), I, columns 562-565, cited in W.S. Gwynn Williams, Welsh National Music and Dance, fourth edition (Llangollen, 1971), pp. 114-116.

Three processional dance tunes appear as Examples 13-15 (also Recorded Examples 1-3).



Plate 15--Welsh woman's attire, seventeenth and early eighteenth centuries.



Example 13--Processional dance tune, "Abergenni"³²



Example 14--Processional dance tune, "Ffair Caerffili"³³

³² Performed by each competing group, folk dancing competition, Royal National Eisteddfod, Haverfordwest, Pembrokeshire, August 9, 1972.

³³ Tune provided by Yvonne Davies (August 3, 1972), who explains that a gradual tempo increase begins after the first full repetition and continues to the end of the dance, making the last strophe about half again as fast as the first.

$\text{♩} = 100$ *S.*

The musical score is written on ten staves. It begins with a tempo marking of quarter note = 100 and a section label 'S.'. The key signature has one flat (B-flat). The notation includes various rhythmic values such as eighth, sixteenth, and thirty-second notes, as well as rests. There are first and second endings marked with '1' and '2' on several staves. A 'FINE' marking appears on the seventh staff. The piece concludes with a triplet of eighth notes on the tenth staff.

Example 15--Processional dance tune, "Pigau'r Dur"³⁴

³⁴ Performed by the second competing group, folk dancing competition, Royal National Eisteddfod, Haverfordwest, Pembrokeshire, August 9, 1972.

Example 15--Continued

Social dancing, which was often but not always associated with weddings and other festive occasions, was held at some location suitable for mass activity: an inn, the kitchen of a farmhouse, or the twmpath (village green). Significant dance forms included the hornpipe (Example 16 and Recorded Example 5), the jig (Example 17 and Recorded Example 6), the reel (Recorded Example 4), the figure-of-eight and various ring dances.

Solo dancing, like non-ceremonial group dancing, was a social activity which was not necessarily connected with a special event. Solo dancing, however, was often competitive, involving feats of strength and agility. Of the solo dances, probably the most popular was the clog dance (Example 18 and Recorded Example 12).



Example 16--Dance tune formed by combining the horn-pipes, "Nos Galan" ("New Year's Eve") and "Llwydgoed"³⁵



Example 17--Jig tune, "Ceilog y Rhedyn"³⁶

³⁵ Tune provided by Yvonne Davies, August, 1972.

³⁶ Performed by the second competing group, folk dancing competition, Royal National Eisteddfod, Haverfordwest, Pembrokeshire, August 9, 1972.

1. The clog dancer enters the room with a broom across shoulders and executes a sauntering step.



2. He now adds a few more ambitious steps.



3. The dancer now places the broom flat on the floor and begins to dance over it, introducing a series of varied steps.



Example 18--Clog dance music and explanation of dance³⁷

³⁷ Both music and explanation provided by Yvonne Davies, August, 1972.

Example 18--Continued

4. At this stage, he usually progresses toward a lighted candle on the floor. He then dances both around and over the candle, using a variety of special steps.



5. Finally, he introduces his most intricate steps and ends with a flourish. (D.S. al Fine)

The Crwth Player

Classes

Crwth players were either professional musicians or amateurs whose livelihoods were earned in other ways. Although the former class may have originally been the larger, laws against minstrelsy eventually became severe enough to cause a decrease in the size of the professional class, and by 1700 it was virtually non-existent.

Manner and Character

Performers on the crwth were often as curious as the instrument which they played. Surviving tales not only reveal something of their individual characters but also point toward such relatively common traits as quick and cryptic wit, clever resourcefulness, intense devotion to their art, and a degree of aloofness and inscrutability. The accounts below are from the three periods in the life of the modern crwth. The first period (ca. 1500 - ca. 1600), within which the instrument was fully developed and established, is represented by two tales from the life of Rhys Crythor. The second period (ca. 1600 - 1735), that of the crwth's greatest prominence, is represented by the account of the old crwther of southwestern Wales. From the third period (1736 - ca. 1850), that of the instrument's decline, come the stories of the activities of Shawms y Crythor and James Green.

Rhys Crythor.³⁸--In the early sixteenth century, there lived in the vicinity of Caerwys a curious character named Rhys Crythor. Rhys was probably one of the best crwth players in all Wales, for he won the crwth competition at the 1525 Eisteddfod. Judging from the time at which he was active, Rhys was a member of the second generation of performers on the modern crwth.

Although Rhys was regularly in attendance at dances and other social gatherings, he was insular and difficult to get along with. His eccentricities led many to believe that he was of either feeble or unsound mind. Rhys, who was always doing strange things in order to draw attention to himself, once rode into a town with both the mane and the tail of his horse clipped extremely short. This antic did not work as Rhys had anticipated; the townspeople laughed not at Rhys but at his horse. This made Rhys very angry.

That same afternoon, Rhys, noticing that the town stable was unattended, went inside and located the horses of several of the town's leading citizens. He smiled diabolically as he unsheathed his long, sharp knife. Shortly thereafter, the owners of the horses walked into the stable and were stricken speechless with horror at what they saw. Each horse had both its cheeks deeply slashed from the

³⁸Each of these accounts is a synthesis of two slightly varied versions. In each case, one version was related by Ioan Evans and the other was related by Nansi Richards.

corners of its mouth to the base of each ear. Rhys had just finished the ghastly deed.

"Ha, ha, ha, ha, ha!" he laughed hysterically, wiping the knife on his shirt. "Yes, my horse is a funny sight indeed; look, even your horses are laughing at him!"

Another story relates how Rhys introduced his wife to the people of a nearby town. The professional crwth player had to travel constantly, and life on the road was not considered fit for a woman to lead. Therefore virtually no one knew whether or not Rhys had a wife, let alone who his wife was. This situation both vexed Rhys's wife and caused much gossip and speculation among the curious peasants. Rhys finally tired of both his wife's shrewish complaining and the townspeople's idle gossip, some of which he occasionally overheard. One evening, Rhys told his wife to prepare to ride into town with him the next morning. The two arrived at the fair about mid-morning of the next day, shortly after the festivities had begun.

A little while later, Rhys said to his wife, "Dearest, go and take for yourself those shoes which are hanging from the pegs in the cobbler's kiosk yonder."

"Indeed, I sha'n't! They are not mine."

"Ah, but they are, love. I bought them for you a few moments ago while you were visiting another kiosk."

Upon hearing this, Rhys's wife went to the cobbler's kiosk, took down the shoes, and walked away with them.

"Haloe, there! Stop! How dare ye go a-takin' that o' mine for which ye ha' paid not?" cried the agitated cobbler, and suddenly all eyes were upon the poor, confused woman. As a crowd gathered, a man with an air of authority approached and asked what was amiss. After the cobbler told his story, the man turned to Rhys's wife and asked, "Madam, who are you? Are you a stranger hereabouts?"

"I most assuredly am not!" she replied. "I live but a short way down the road, and I am the wife of Rhys Crythor!"

The old crwth of southwestern Wales.³⁹--It was thought that some crwth players had supernatural powers. One such person was an old man who was active in southern Cardiganshire, northern Pembrokeshire and northwestern Carmarthenshire during the seventeenth century. He would often appear at a fair in Pembrokeshire during an afternoon, disappear as surreptitiously as he had come, and be seen in south-central Cardiganshire that same evening. Such rapid travel was unheard of in days when a journey of only fifteen to twenty kilometers usually took all night. With his long, white hair and beard, the old man looked like the reincarnated spirit of some ancient Celtic sage, and he was deemed wholly unapproachable.

³⁹One version of this folk legend of southwestern Wales is rendered in Meredith Morris, op. cit., pp. 198-200.

On more than one occasion, the old man sang, to the accompaniment of his crwth, a melancholy song in which he prophesied someone's misfortune. His most chilling prophecy, delivered at a wedding feast, was also his last:

This is my song of final farewell,
 For after I have finished and departed,
 You shall see me no more;
 And your rejoicing for these young people
 is premature,
 For I see nothing but dreadful tragedy
 for them
 And much grief for their friends
 and loved ones,
 And that before the next setting of the sun.

The next morning, the young bride was found strangled to death in her bed. Her husband, who was suspected of the horrible deed, was never found, and the old crwth player was never seen again.

Shawms y Crythor.⁴⁰--Shawms y Crythor lived in far western Pembrokeshire during the early nineteenth century. Whenever there was a social gathering in the area, both Shawms and his crwth were there. Both his instrument and the art of playing it had been handed down from father to son for many generations. It grieved Shawms that none of his sons showed any interest in learning to "do the crwth" and that they thought him a bit strange to cling to an antiquated art which was all but dead. Many of the townspeople felt the same way, but they liked the old man and were

⁴⁰Ibid., pp. 166-171.

disinclined toward hurting him by appearing unappreciative of his efforts to entertain them.

On one occasion, the whole town had turned out to watch an athletic contest. Suddenly a fight erupted on the playing field, first between two players then between the two teams. The unfriendly spirit began to permeate the two factions of the crowd. Shawms, seeing what the final result could be, began to fiddle away at a lively dance tune, and within moments the impending fracas turned into an impromptu twmpath ddawns.

Shawms died in 1849 at the age of eighty-seven years. Since none of his sons had any interest in his crwth, it was buried with him.

James Green.⁴¹--At about the same time that Shawms y Crythor was active in Pembrokeshire, there lived in the vicinity of Bronygarth a man named James Green (?-1855). There is some question of whether Green's crwth was a bowed lyre or a violin, but since Shawms y Crythor played the bowed lyre, Green may have also. If he did, then he was quite possibly the last of the old crythorion.

Once, when he was walking along a road on his way to a dance, Green was confronted by an angry bull that had strayed from someone's pasture. With the bull in hot

⁴¹ Adapted from Francis W. Galpin, Old English Instruments of Music, pp. 77-78.

pursuit, Green quickly retreated up a tree and seated himself on a limb. The furious bull stamped its feet and tossed its head below. Green, in addition to being disappointed because of what appeared to be his forced absence from the dance, disliked wasting his time sitting idly up in a tree. To pass the time until the bull left, Green began to fiddle. At this, the bull gave a terrified snort, turned, and ran.

"Stop! I'll change the tune!" cried Green, but the bull soon disappeared around a bend in the road.

The Collapse of Welsh Musical Culture

Reciprocal influences between three traditions must have existed throughout the ages: the music of the Church, the cultured music of the bards and the natural music of the folk, infusing, sustaining and renewing each other from time to time.⁴²

The forced dissolution of the relationship between these three genres brought about the end of the distinctive and largely independent musical culture of Wales. During the twelfth through sixteenth centuries, political pressure from time to time suppressed the activities of the bards and minstrels, but native musical pursuits were deeply ingrained in a majority of the people and by and large remained unscathed. The situation changed drastically with the establishment of evangelical protestantism because pressure was

⁴²Peter Crossley-Holland, "The Growth of Music in Wales," Music in Wales, edited by Peter Crossley-Holland (London, 1948), p. 21.

now being exerted from within rather than from outside the society. Dancing, the singing of secular songs, and the playing of instruments associated with secular activities were both condemned and suppressed.

The Evangelical Movement and its Effects

The roots of the evangelical movement go back to 1634, when Wroth instigated a short-lived revival in Monmouthshire.⁴³ The first large, well-organized Welsh nonconformist sect was established in 1688.⁴⁴ A prominent literary spokesman for the movement, Ellis Wynne (1670-1735), reported having visions of persons dancing upon the hot pavement of hell to the music of the crwth.⁴⁵ In 1703, Wynne wrote:

Along the street [of the Princess of Pleasure] we could see them playing interludes, juggling and conjuring, singing lewd songs to the sound of harp and ballads, and all manner of jesting. Men and women of handsome appearance danced and sang, and many came hither . . . in order to be praised and worshipped.⁴⁶

⁴³Élie Halévy, The Birth of Methodism in England, translated and edited by Bernard Semmel (Chicago, 1971), p. 59.

⁴⁴Henry Clark, The History of English Nonconformity (New York, 1965), I, 297.

⁴⁵Related by Ioan Evans.

⁴⁶Ellis Wynne, Gweledigaethu y Bardd Cwsc (London, 1703), translated by Robert G. Davies and published under the title, The Visions of the Sleeping Bard (Caernarvon, 1897), p. 17; cited in W.S. Gwynn Williams, Welsh National Music and Dance, p. 119.

Wynne's document was followed in 1734 by Gemneu Doethineb (Gems of Wisdom), by Rhys Prydderch. One interesting item is the dialogue between the minister and the dancer, in which the minister replies to each of the dancer's questions with either a fundamentalist bromide or a passage of scripture, generally lifted out of context.⁴⁷

Evangelical protestantism took an upswing in 1735 with the "conversion" of Howell Harris (1714-1790) and Daniel Rowland (1713-1790), a de-frocked Anglican priest. By the next year, the first of the great revivals was in progress. The manner in which Harris, Rowland and other evangelists operated is illustrated by a letter written to Harris by one Mary Giles in 1740.

Dear Sir

these few lines brings my kind love to you and many thanks for the last Conversations and according to your desire have Declared Sum part of what the lord hath done for my Soul Since the happy day as I seed you in Cearlion the lord knoweth how I spent my time til I was twenty years of age and how I Run'd after the world and its vanities and lightly esteemed the Rock of my Salvation he was pleaed to vissit me with a fit of Sickness which made me give my Self much in reading the Considerations upon eternity but as soon as I got well I driv'd of my Serious thoughts in a little time I was tould of your coming about to preach I did wonder the Reason that you was much against dancing which griev'd me mightily and Sturd the whole Pharisee in my heart till I knew not what I was about one day I took the holy Bible and when I open'd it the Place was where Aron made the Caulf and how greatly their danceing provoked the lord to anger then I heartily desired to hear you my self and the mercifull god was placd to send you very soon o I went to hear you with Joy but before I left you

⁴⁷See W.S. Gwynn Williams, Welsh National Music and Dance, pp. 120-121.

I could hardly Stand before you for I thought all that
 was there did See me more vile than any one home I went
 with my trembling heart ready to Cry out what shall I
 do to be saved⁴⁸

In 1739, the Welshmen were joined by the English Methodists, John Wesley and George Whitefield. The success which the evangelists realized is shown in Dimond's reports of congregational reactions during the interim between 1739 and 1743. Altogether, Dimond reports two hundred thirty-four cases of markedly abnormal conduct.⁴⁹ This report does not include any of the hundreds of cases of individual participation in the common group reactions, many of which approached mass hysteria.

Consideration of the intensity of the movement's psychological impact makes the widespread abandonment and destruction of such "Satanic" implements as the crwth and the pibgorn not in the least surprising. The triple harp was not confined to the area of folk music, and many of its practitioners were thus outside the sphere of the evangelists' influence. The instrument was therefore to a degree preserved. The crwth and pibgorn would probably have been gradually replaced by more modern instruments, but recurring waves of revivalism forced these folk instruments

⁴⁸"The Treveca Letters," Journal of the Calvinistic Methodist Society, I (1917), edited by J. Morgan Jones, p. 260. Phraseology, punctuation and spelling are unaltered.

⁴⁹Sydney Dimond, The Psychology of the Methodist Revival (London, 1926), pp. 127, 277-279.

into rapid, untimely oblivion. Once the tide of madness had permanently ebbed and secular song and dance were once again popular, the violin filled the void which was created by the crwth's disappearance.

So ended the days of the crwth. Its death, like both its birth and its life, was intimately bound to both the activities and the thoughts of the people whose song and dance it accompanied with its rustic droning and twanging.

To have lived beyond [this time] would not have been good for the health of the last of the crwth-orion, and it was well that he slumbered and slept. May his shade be mightily comforted when the zephyr playeth upon the crwth of the old yew tree.⁵⁰

⁵⁰ Meredith Morris, "The Crwth," p. 171.

CHAPTER V

THE LYRE

The crwth is one of the last and most structurally advanced forms of the lyre. For this reason, the formulation of a theory of the crwth's genealogy is in part dependent upon an investigation of the evolution and history of the lyre.

The Plucked Lyre

Instruments of Ancient Civilizations

Sumerian.--It appears that the lyre first appeared in Mesopotamia around 3000 B.C. Early Sumerian lyres were extremely large; icons show them resting on the ground and standing higher than a seated man. The strings, of which there were eight through eleven, were plucked by the fingers of both hands in a manner much like that used in playing the harp.¹

Also important was the small lyre with a fingerboard and no yoke. Although this instrument did not become popular until between 1500 and 1000 B.C., there are representations

¹Curt Sachs, The History of Musical Instruments, pp. 78-79.

of such instruments in Sumerian bas-reliefs dating from ca. 2500 B.C. (Plate 16).



Plate 16--Mesopotamian lyre with independent finger-board (ca. 2500 B.C.).²

Semitic.--The eastern Mediterranean area seems to have been the next region in which the lyre was used extensively. The Semitic lyre, or kinnor (Plate 17), was both symmetrical and small enough to be held in the hands.

Egyptian.--The Semitic lyre appears to have been brought into Egypt by wandering tribesmen about 2000 B.C.

Around 1750 B.C., an era of cultural decadence began when the Babylonian civilization was destroyed by the Kassites and Egypt was taken over by Hyksos invaders. By 1500 B.C., Egypt was again powerful, overrunning and subjugating southwestern Asia and adopting much of its culture.

²Georg Kinsky, A History of Music in Pictures, (New York, 1937), p. 1.



Plate 17--Semitic lyre (ca. 2000 B.C.)³

Pictures and sculptures from the New Kingdom show that lyres were constructed like middle-Eastern instruments of the same time. No earlier than 1000 B.C., a small, rectangular lyre with parallel uprights and a horizontal crossbar came into Egypt from the middle-East. This instrument (Plate 18, second from right) was probably a variant of the earlier Semitic lyre.

³Ibid., p. 6.

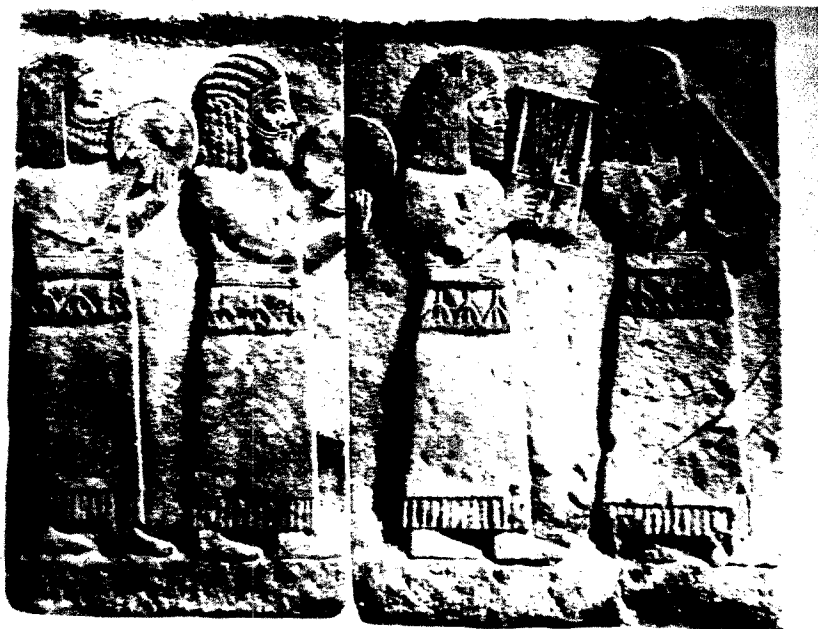


Plate 18--Assyrian bas-relief, showing both symmetrical and asymmetrical lyres (ca. 800 B.C.).⁴

Middle-Eastern fingerboard lyres.--Eventually the fingerboard lyre without a yoke assumed a place of importance in both Arabia and the northeastern Mediterranean region. The earliest form, which had either straight or convex sides, was probably borrowed directly from Mesopotamia.

The straight- and convex-sided instruments continued to thrive in Arabia, but concave sides came to be favored in the north between 1500 and 1000 B.C. (Plate 19).

⁴Ibid., p. 2.



Plate 19--Lyre with independent fingerboard and waisted resonator, shown in a Hittite bas-relief (ca. 1000 B.C.).⁵

Greek kithara and lyra.--The primary significance of the kithara lies in its association with the recitation of epic poetry to music. From this practice began both bardism and minstrelsy, which in turn gave impetus and sustenance to both the dissemination of the lyre throughout Europe and the long, complex series of structural and practical modifications which the instrument underwent during the course of its existence.

⁵Ibid., p. 1

The kithara had a heavy, sturdy body, whose belly and vaulted back were separated by ribs. The number of strings gradually increased from three and four in the ninth century B.C. to twelve in the fifth century.⁶

The lyra was the instrument of beginners who, upon becoming master musicians, were allowed to play the kithara. The resonator was either a tortoise shell or a wooden bowl. A piece of skin, drawn tightly across the opening of the resonator, served as a belly. Animal horns or wooden sticks were inserted into the resonator and projected outward from it, forming the uprights, which together with a wooden crossbar, supported the strings. The strings, corresponding in number to those of the kithara, were attached to the underside of the resonator and drawn over a bridge, which rested on the belly.⁷

Whether the kithara and lyra were the result of Egyptian or Asiatic incursions is difficult to determine. There is a strong probability that both civilizations made their contributions since symmetrical lyres were common in both regions by 1000 B.C. Another interesting issue concerns possible Minoan contributions, but no speculation can be made because so many particulars of Minoan civilization, including the language, are currently unsolved mysteries.

⁶Curt Sachs, op. cit., pp. 130-131.

⁷Ibid., p. 131.

Roman cithara and testudo.--Rome, like Egypt, often absorbed much of the culture of newly acquired regions. Such was especially true in the case of Greece, which became a Roman province in 143 B.C. The Roman equivalent of the kithara was the cithara. Although the cithara was originally modeled upon the kithara, it eventually underwent some structural modifications.

Corresponding to the lyra was the testudo (turtle), so named because of the tortoise shell from which the resonator was made.

Ancient and Medieval Instruments of Europe

During the thousand years preceding the beginning of the Christian era, the lyre moved into the main part of Europe from Greece, the middle-East, and later, Rome. Both the Greco-Roman and the Asiatic instruments underwent modification after their introduction into Europe. An Allemanic warrior's lyre from the sixth century of the Christian era (Plate 20) is a rare and late example of a virtually unaltered Eastern instrument. Characteristic western Asiatic features include a tapering body, an extremely shallow resonator, an independent crossbar, and a string holder which completely encircles the instrument's lower end. Such features, especially in combination, are rarely found in European lyres.⁸

⁸Ibid., p. 268.



Plate 20--Allemanic warrior's lyre (sixth century);
Ethnological Museum, Berlin.⁹

Most modified European instruments more nearly resemble Eastern lyres than Greco-Roman forms. One very distinctive feature of the European lyre is the integral yoke and crossbar. Another distinguishing characteristic is the regulation of string tension by means of wrest pins.¹⁰

⁹Georg Kinsky, op. cit., p. 31.

¹⁰Curt Sachs, op. cit., p. 267. Sachs adds that these characteristics began to appear with a high degree of consistency only after ca. A.D. 500.

The introduction of the lyre into central and northern Europe was an aspect of the cultural contact between the peoples of that region and the inhabitants of Greece, Rome and Asia Minor. Contact between the Greeks and the Celts, originally a central European people, was especially close for several centuries, reaching its zenith in the fourth century B.C. The Celts also had close contact with the Iberians, the Germans, and those who since the close of the last Ice Age had occupied the British Isles, which the Celts first invaded in ca. 500 B.C. More than any other single people, the Celts were responsible for the assimilation, modification, and dissemination of Greek culture. The Celts, who established settlements as far eastward as Asia Minor, also surely deserve much of the credit for the spread of the western Asiatic lyre into Europe.

By the time Rome had risen to the height of its power, the Celtic bardic order was firmly established, and the lyre, which the bards used to accompany the chanted recitation of epic poetry, was known in the most distant areas of the Western world. Evidently the situation had been this way for some time; the earliest mention of the use of the lyre by the Keltoi was made in the sixth century B.C. by Hecataeus of Miletus, the Greek historian.

By the close of the first century of the Christian era, the lyre probably existed throughout Europe in several different shapes, sizes, and designs. In ca. A.D. 600,

Venantius Fortunatus noted the nominal and the probable structural dissimilarity of the string instruments which were then in use (p. 63). Perhaps the most impressive iconographic representations of distinctively Celtic lyres of the first millenium of the Christian era are the numerous reliefs on Irish stone crosses (Plate 21). Some of these sculptures show not only lyres but also what appear to be small harps.



Plate 21--Celtic lyre represented on the high cross at Durrow, Republic of Ireland (ninth century).¹¹

¹¹ Arthur Kingsley Porter, The Crosses and Culture of Ireland (New Haven, 1931), Figure 111.

Between about A.D. 500 and A.D. 1100, the non-classical European lyre assumed two primary shapes: round and square. There were numerous variants of these basic shapes (Figure 7). Both the vaulted back and the flat back were common, but the former type predominated.

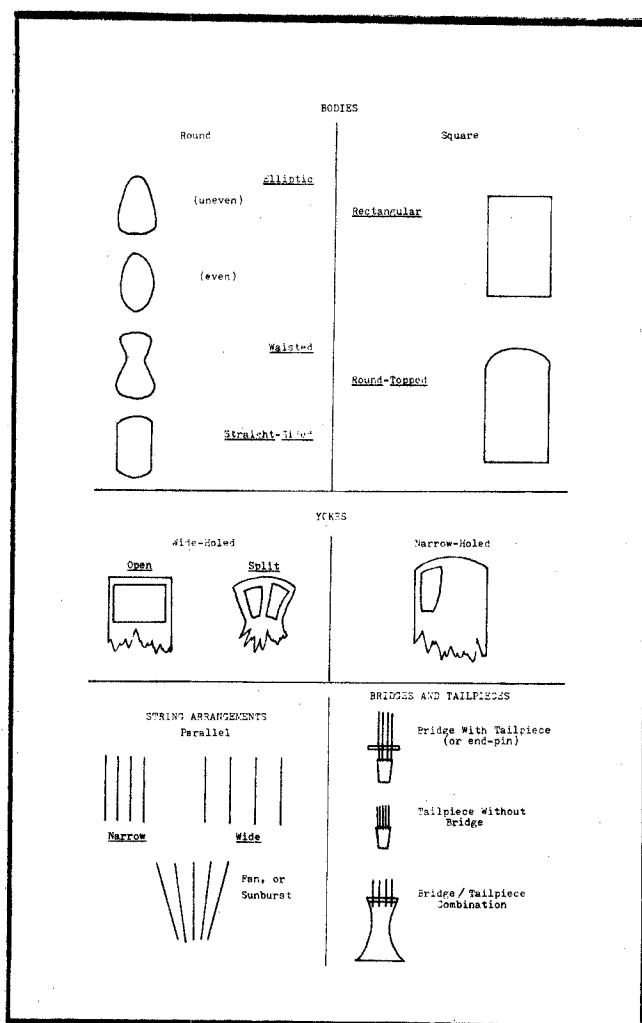


Fig. 7--Basic structural characteristics of the non-classical European lyre, ca. A.D. 500 - ca. A.D. 1100.

The Bowed Lyre

Early Developments

Introduction of the bow.--Although the bow may have been developed and used experimentally in Europe before A.D. 900, it does not seem to have been much used until after its introduction into Europe from the East. The oldest extant iconographic representation of the chordophone bow in Europe is a detail from a miniature in Biblioteca Nacional Manuscript Hh. 58, f. 127r. (Plate 22). Judging from the apparent point of incursion and the shape of the instruments shown, the bow, whose origin seems to have been in central Asia sometime in the early eighth century,¹² first entered Europe as a companion of the Arabian rebab, which was probably introduced by Moorish invaders of the Iberian Peninsula. From Gibraltar, both the rebab and its bow spread both eastward and northward throughout Europe.

At about the same time that the Arabian incursions began, the waisted fiddles of Assyria and Byzantium entered Europe and moved both northward and westward from the Bosphoros.

The rebab became known as the rebec, and the waisted fiddle assumed a large number of varied forms and names.

¹²Unless otherwise indicated, all dates given from this point are within the Christian era.



Plate 22--Earliest positive evidence of the use of the bow in Europe (ca. 925).¹³

Neither the rebec nor any of its numerous kin ever achieved high status in Europe, but they were great favorites of minstrels, especially on the continent and in Anglo-Norman Britain. The waisted fiddle underwent a long and complex series of developments, including the eventual assimilation of the techniques of the rebec. In this manner, it became the patriarch of modern bowed string instruments.

¹³Biblioteca Nacional (Madrid) MS Hh. 58, f. 127r., reproduced in Werner Bachmann, The Origins of Bowing, translated by Norma Deane (London, 1969), Plate 1.

Application of the bow to the lyre.--At the time the bow entered Europe, the plucked lyre in its many different forms was still in the process of evolving. Except in a few cases, the fingerboard does not appear to have been used. The bow, therefore, was first applied to the different round and square lyres with open yokes (Plate 23). These early instruments still survive virtually unchanged as the wide- , single-holed instruments of Scandinavian regions (Plate 24). The strings of these instruments are stopped by pressure of either the fingertips or the fingernails.¹⁴

When the bow reached Britain in the early eleventh century, it was applied to both the native and continental lyres. An example of what may have been a native instrument is shown both in a Cambridge University Library manuscript (Plate 25) and on a column of Saint Finian's Church at Waterville, County Kerry, Republic of Ireland (Plate 26). The instrument may have been developed before the advent of the bow, but the two earliest representations, cited above, show the instrument being played with a bow.

As the plucked lyre continued to evolve, the bowed lyre followed until the disappearance of all but a few members of the former class, after which bowed lyres continued to evolve with somewhat less rapidity than before. One of the earliest and most curious pictures of a bowed lyre with a

¹⁴ Otto Andersson, The Bowed Harp, pp. 33, 39, 139-140, 169, 261.

longitudinal fingerboard is an illustration in the Brunonis Psalterium (Plate 27). Despite the advantage of fingerboard technique over nail technique, the longitudinal fingerboard seems to have experienced slow acceptance as it does not begin to appear with either great frequency or appreciable consistency until the fourteenth century. An apparent intermediate step was the longitudinal division of the yoke (Plate 28). The date of the icon reproduced as Plate 28 has led Hortense Panum to term the instrument a "thirteenth-century, Anglo-Saxon square lyre with fingerboard."¹⁵ The instrument is a square lyre, but as Plate 27 seems to prove, it is of neither thirteenth-century nor Anglo-Saxon origin. Further, both illustrations show a yoke division which is far too narrow to serve as a fingerboard. This instrument still survives as the bowed, double-holed, Scandinavian jouhikantele (Plate 29), which, like the talharpa, is played using nail technique.

The longitudinal fingerboard appears to have been a common feature of the European bowed lyre by the early fourteenth century, and it is from this time that most of the obvious ancestors of the modern crwth date.

¹⁵Hortense Panum, The Stringed Instruments of the Middle Ages, p. 230.



Plate 23--Twelfth-century round lyre, both plucked¹⁶
and bowed.¹⁷

¹⁶ British Museum MS Harley 2804, f. 3v., reproduced in Werner Bachmann, op. cit., Plate 61.

¹⁷ Bayrische Staatsbibliothek MS Lat. 2599, f. 96v., reproduced in Georg Kinsky, op. cit., p. 39.

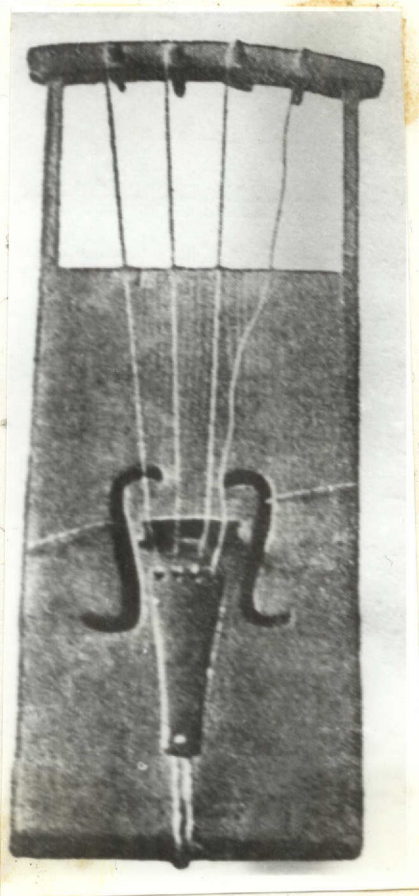


Plate 24--Estonian talharpa, a bowed square lyre¹⁸

¹⁸Otto Andersson, The Bowed Harp, p. 125.



Plate 25--Detail from an eleventh-century English manuscript: Asaph playing a bowed lyre.¹⁹

¹⁹Cambridge University Library MS Ff. I. 23, f. 4v., reproduced in Werner Bachmann, op. cit., Plate 92.

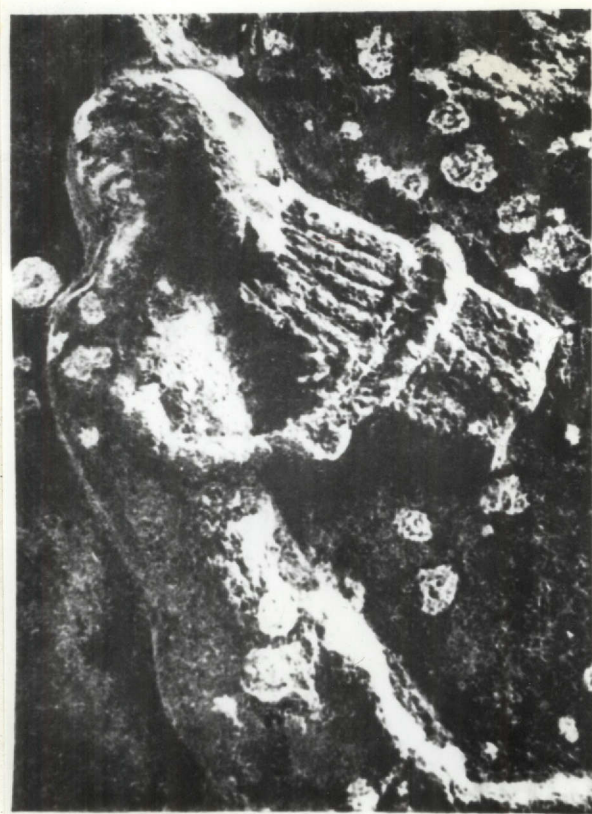


Plate 26--Twelfth-century representation of a bowed lyre; Church of Saint Finian, Waterville, County Kerry, Republic of Ireland.²⁰

²⁰Werner Bachmann, op. cit., Plate 93.



Plate 27 (previous page)--Illustration of an early bowed fingerboard lyre in the Brunonis Psalterium (Italy, early twelfth century).²¹



Plate 28--Split-yoke square lyre (Anglo-Saxon, thirteenth century).²²

²¹Bibliothèque Nationale MS Lat. 2508, f. 2v., reproduced in Werner Bachmann, op. cit., Plate 23.

²²British Museum MS Additional 35166, f. 4v., reproduced in Hortense Panum, op. cit., p. 230.



Plate 29--Two-holed Finnish jouhikantele²³

²³Otto Andersson, op. cit., p. 67.

CHAPTER VI

GENEALOGICAL CONJECTURES, HYPOTHESES, AND THEORIES

Most significant ideas regarding the genealogy of bowed chordophones have touched in part upon the modern crwth, but there is considerable variance of beliefs about both the role which it has played and the place which it occupies within the family. These ideas, together with a new but not totally novel one, are dealt with in this last chapter.

The Celtic Nationalistic Conjecture

Probably the oldest idea which takes into account the modern crwth is that which, due to a lack of any single name with which to associate it, could be called the Celtic nationalistic conjecture. According to the proponents of this concept, the modern crwth has existed since ancient times, when it was a favorite instrument of the bards. It is further believed by some that the modern crwth is the patriarch of modern bowed chordophones, which originated when the crwth's yoke was removed and when its sides were indented to facilitate bowing. The lack of support for the first set of beliefs has already been dealt with, and so have the Eastern origin of the bow, the lyre with independent finger-board, the incurved sides of the latter, and the introduction

of the yoke lyre into Europe. A corollary negative argument is that bowed instruments with both independent fingerboards and waisted sides were in use in Europe prior to the appearance of the modern crwth. It is therefore useless to argue that a crwth with indented sides and no yoke would resemble a violin.

Recognition of Eastern Influences: Fétis

Francois Joseph Fétis notes the probable Asiatic origin of both the bow and the independent fingerboard, but he very likely errs in saying that "there is nothing in the West which did not come from the East."¹

Fétis's beliefs concerning the crwth are as follows:²

1. The bow was known among the Celts at least as early as the middle of the first millennium, and the crwth has been preserved since that time. Such is proven by the poem of Venantius Fortunatus (p. 63).

2. European bowed instruments trace their ancestry directly from the primitive instruments which were brought into Europe by nomads from India. This is in part proven by the way in which crwth can be traced to the Sanskrit word, krus (to cry out).

¹ Francois J. Fétis, Notice of Anthony Stradivari, translated by John Bishop (London, 1864), p. 9.

² Ibid., pp. 10-29.

3. The three-stringed crwth, or "crwth trithant," is represented in a manuscript in the Bibliothèque Nationale (Plate 30). The crwth trithant was both distinct from the rebec and supplanted by the six-stringed instrument at an unknown date.



Plate 30--Three-stringed bowed lyre with yoke division which evidently served as a fingerboard (Abbey of Saint Martial, Limoges, eleventh century).³

³Bibliothèque Nationale MS Lat. 1118, f. 104r., reproduced in Werner Bachmann, op. cit., Plate 91.

From this point, the lyre shown above will be designated either "the Saint Martial instrument" or simply "Saint Martial."

The age of both crwth and related words can perhaps be determined from literary evidence alone, but it seems that the age of the modern crwth cannot be so determined. The poem by Venantius Fortunatus does not prove that the sixth- and seventh-century Celts used the chordophone bow.

It is now commonly believed that nothing definite is known about the racial origins of the earliest Europeans.⁴ Fétis not only fails to prove that the primitive bowed instruments of central Asia reached Europe prior to the great wave of middle-Eastern incursions but also fails to trace the supposed metamorphoses of these primitive instruments.

The proported origin of crwth is probably another facet of Fétis's preoccupation with the East. Other than the colloquial expression, canu'r crwth (to purr), crwth has no meaning which even remotely approaches that of krus.

Both the Saint Martial instrument and the modern crwth are bowed fingerboard lyres. Beyond this point, resemblance ceases. Once again, looseness of terminology both makes the occurrence of crouthe, its cognates, and its other synonyms meaningless and invalidates the premise of any consistently parallel structural and semantic distinctions between crwths and rebecs.

⁴Richard M. Wilson, "English Language," Encyclopaedia Britannica (London, 1962), VIII, 555.

By the eleventh century, there was being drawn in Welsh literature a distinction between three- and six-stringed crwths.⁵ This in itself tends to nullify Fétis's argument that the Saint Martial instrument was the despised three-stringed crwth. Further, the distinction was being drawn before the appearance of the modern crwth and probably before the appearance in Britain of the three-stringed crowd of the Westminster type (Plate 10, p. 67), which seems to have been a forebear of the modern crwth.

Recognition of Western Influences: Schlesinger

Kathleen Schlesinger traces the ancestry of all European chordophones from the classical lyres of Greece and Rome, arguing that the lyre went through four major transitional stages, namely, centralization of the strings and the adoption of the fingerboard principle, the removal of the yoke, the application of the bow, and the incurvation of the instrument's sides.⁶ An example of one of these transitional instruments is depicted in the Bible of Charles le Chauve (Plate 31).

⁵Hortense Panum, op. cit., p. 243.

⁶Kathleen Schlesinger, Instruments of the Modern Orchestra and Early Records of the Precursors of the Violin Family, second edition (London, 1969), pp. 327-351.

Schlesinger believes that the Eastern fingerboard was adopted by the Greeks (ibid., p. 344), but there is no sound proof of the fingerboard's continuous presence in Europe before ca. 900.

Schlesinger attaches great importance to this instrument, and she even maintains that it, not the instrument championed by Fétis, was the crwth trithant.⁷



Plate 31--Lyre depicted in the Bible of Charles le Chauve (mid-ninth century).⁸

⁷Ibid., p. 337.

⁸Bibliothèque Nationale (? MS), reproduced in Ferdinand de Hen, Musical Instruments in Art and History, translated by Bill Hopkins (New York, 1968), p. 48.

Again it appears that too much emphasis is placed upon superficial resemblances -- in this case, the presence of three strings and a fingerboard -- in attempting to trace the ancestry of the modern crwth. With only a few exceptions (Plates 32 and 33), the neo-classical lyre seems to have enjoyed its greatest popularity in Carolingian and immediately post-Carolingian France, where much emphasis was placed upon classical elegance. Further, these instruments with classical lines, which probably constituted a genre distinct from the cruder lyres, seem to have been in large measure supplanted by the instruments of the latter class before the advent of the bow. Most significantly, the hypothesis of Schlesinger does not account for the apparent existence of the cruder instruments prior to the time of the examples of the more refined one. Thus it seems that the lyre represented in the Bible of Charles le Chauve was one of the members of an old class of instruments rather than an early member of a new class.

Finally, Schlesinger seems to go as far to one extreme as Fétis goes to the opposite one, assuming most major developments to have taken place in the West and underestimating the significance of both the development in and the exportation from the East of independent fingerboard lyres, some of which had waisted sides. Schlesinger's suggestion that the waisted European instrument with a fingerboard is merely a modified kithara is thereby specious.



Plate 32--Split-yoke, neo-classical bowed lyre; ivory sculpture on the binding of the Lothar Psalter (France, ca. 1100).⁹

⁹British Museum MS Additional 37768, reproduced in Werner Bachmann, op. cit., Plate 90.

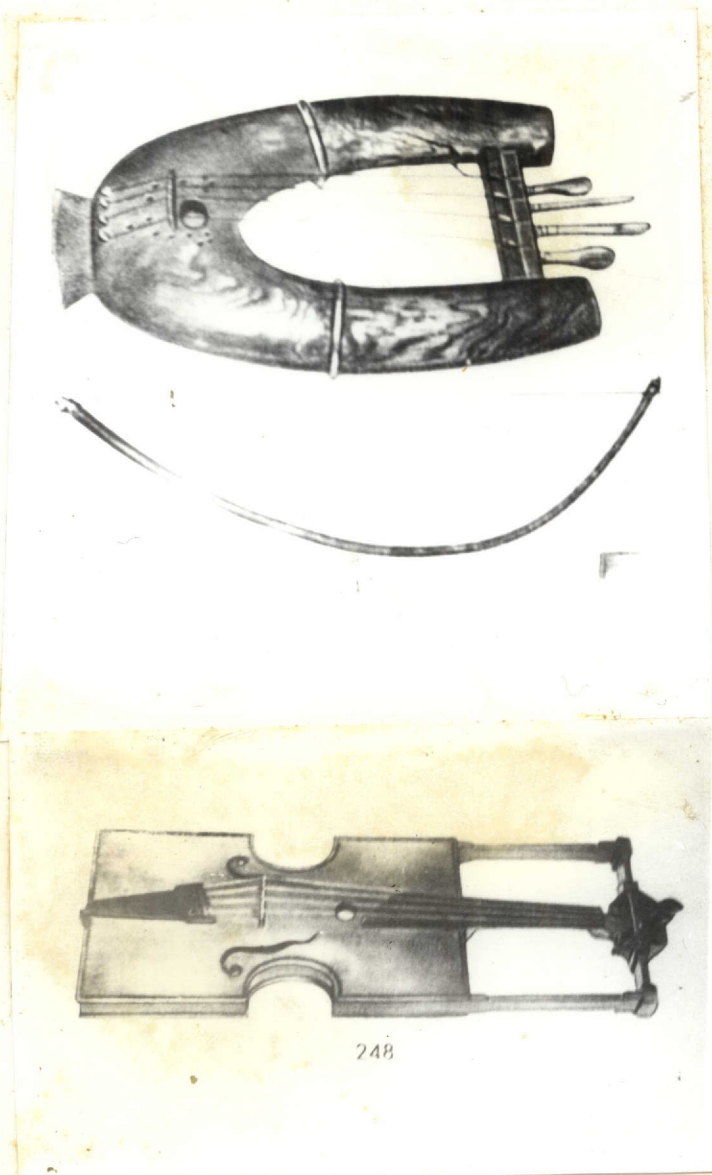


Plate 33--Classical and non-classical lyres: above, the Хийуканнехь (xijukannjel) and below, the Хийуканнехь усовершенствованный (improved xijukannjel), both instruments of western Russia.¹⁰

¹⁰ K.A. Vertkov, G. Blagodatov and E. Iazovitskaya, Atlas Moozikal'niskh Instrumentov Narodov S.S.S.R. [Atlas of Musical Instruments of the Soviet Peoples] (Moscow, 1963), Plates 247 and 248.

Early Ideas About Late Developments: Panum

Hortense Panum subscribes to the belief that the bowed lyre is of mixed ancestry, and she also believes that the modern bowed instruments are of largely Asiatic extraction. Panum further views the modern crwth as both a relatively late development and a quite logical descendant of the round cithara teutonica (Plate 23, p. 117), which was modified to form the so-called "Anglo-Saxon square lyre with fingerboard" (Plate 28, p. 122). Panum also holds that after a period which saw the square lyre equipped with three strings, then four, the combination of four central strings and two bourdons was adopted.¹¹

As has already been pointed out, the instrument shown in Plate 28 is not of Anglo-Saxon origin, and the division of the yoke is not a fingerboard.¹² Panum attributes to poor artistry the failure of iconographic evidence to support her contention, maintaining that the instrument which is shown in British Museum Manuscript Additional 35166 (Plate 28) is the same as that represented both on the seal of Roger Wade the Crowder and, except for one less string, in John of Northampton's painting (Westminster icon, Plate 11, p. 68).¹³

¹¹Hortense Panum, op. cit., pp. 229-232.

¹²See above, p. 116.

¹³Hortense Panum, op. cit., pp. 230-231.

The illustration in the Brunonis Psalterium (Plate 27, p. 121), however, shows the instrument in question being used with a bowed fingerboard lyre which more nearly resembles the Westminster crowd. Further, the instrument which Panum calls a fingerboard lyre still exists as a bowed lyre whose strings, all of which do not traverse the center-piece of the yoke, are stopped using nail technique.¹⁴ It seems then that Panum erred, or at least missed a step, in determining the parentage of the modern crwth and in so doing, erred in implying the relationship of the latter to the bowed lyres of Scandinavia.

The Idea of a Northern European Origin: Andersson

The most extensive scholarly work thus far done on the subject of the European bowed lyre is that of Otto Andersson, whose primary area of interest is Scandinavian instruments. In connection with his research, Andersson has formulated several premises which, stated briefly, are as follows:¹⁵

1. Both the wide-holed, open-yoke bowed lyre and the modern crwth are descended from the narrow-holed, round-backed instrument of northern European origin. The last instrument, according to documentary evidence, seems to date from at least the early ninth century, and with its

¹⁴ See above, p. 115.

¹⁵ Otto Andersson, The Bowed Harp, pp. 257-274.

bulging back and wooden soundboard retaining band, it conforms to Gruffydd ap Daffydd ap Howel's description of the crwth (p. 7), but the modern, flat-backed crwth does not.

2. The European chordophone bow is of northern origin. This is proven by both the age of the European bowed lyre and the northern European preference of bowing to plucking; the latter method is favored in the south of Europe.

3. The bowed lyre seems to have originated in Scandinavia. From there it spread in all directions, eventually reaching Celtic Britain. This is proven by Irish documents which mention the use of both the fingernails and what may have been the bow in cruit playing. The instrument followed roughly parallel courses of development within each of the areas to which it spread until the time of the modification of the narrow-holed instrument into both the wide-holed variety and the modern crwth.

Andersson's investigation, continued after the publication of The Bowed Harp, eventually yielded some different ideas. These conclusions, first published in 1954 and revised in 1970,¹⁶ are:

4. The bowed lyre is likely of Celtic origin, and it probably spread eastward after the fifth century. This in part retracts certain statements set forth in the third

¹⁶ Otto E. Andersson, "The Bowed Harp of Trondheim Cathedral and Related Instruments in East and West," Galpin Society Journal, XXIII (August 1970), 4-34.

item above. The wide-holed instrument illustrated in Manuscript Havod 24 (Plate 34) is the intermediate form between the narrow-holed instruments and the modern crwth.

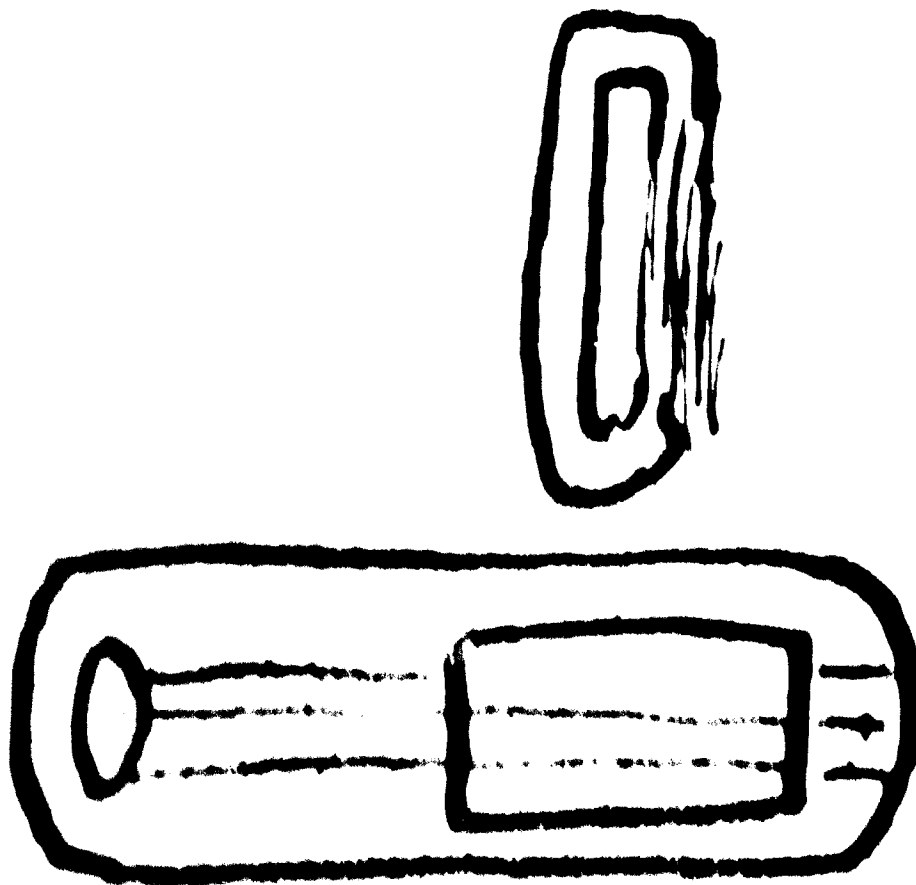


Plate 34--Welsh open-yoke bowed lyre (ca. 1607)¹⁷

¹⁷MS Havod 24 (? f.), reproduced in Peter Crossley-Holland, "The Growth of Music in Wales," p. 18.

Andersson fails to furnish convincing proof of either the use of the bow or the employment of nail technique in early Celtic Britain, and he advances no proof of either the continuous use of the bow in Britain up to the date of the earliest positive evidence of its use there (around 1100) or its extensive spread from there. The supposed preference for bowing in the north as opposed to that for plucking in the south of Europe accounts for neither the fertile ground which southern Europe has for centuries provided for the development and use of the violin nor the very old tradition of harp playing in the Celtic regions.

The passage from the Brehon Laws, which Andersson quotes as evidence of the use of nail technique by the Celts, reads:

If the top of his finger, from the root of the nail, or above the black, has been cut off a person, he is entitled to compensation for his injured body and a fine for his outraged honour in proportion to the severity of the wounds. If the blood has been drawn when cutting his nail off, he is entitled to the fine for blood-shedding for it. If it be from the black circle out that his nail has been taken of him, he is entitled to the same fine as for a white or bloodless blow; and if he be a [lyrist] then there is a quill or feather nail for him besides, by way of restitution.¹⁸

The black circle has been assumed to mean the crescent at the bottom of the nail, but the removal of the nail from this point outward would scarcely be a "bloodless blow."

¹⁸ Otto Andersson, "The Bowed Harp of Trondheim Cathedral," p. 31.

Seemingly more plausible is the idea that the term refers to the perimeter of the portion of the nail which lies against the finger. Accumulation of grime can quickly cause a black ring to form around this part of the nail. The word white, as used in reference to the type of blow incurred, does not necessarily have to be an antonym of black, as used in reference to the circle of the nail. In other words, a person is entitled to the usual restitution for a blow which does not draw the blood if the grown-out end of his fingernail is cut off. If he uses this long-grown end of his nail to pluck the strings of his lyre, he is to be given a quill to use as a substitute nail. When viewed in this context, the passage fails to support Andersson's hypothesis. Further, Manuscript Havod 24 dates from some three hundred years after the latest possible date of the above passage from the Brehon Laws.

Andersson also seems to overlook the contact which the ancient Celts had with not only the Greeks but also certain middle-Eastern peoples whose lyres some of the early non-classical European instruments resemble. One should not discount the possibility that the cruder form of lyre did originate spontaneously somewhere in northern Europe, but the factor of possible acculturation and consequent European absorption of the wide-holed, open-yoke lyre should be taken into account with regard to all epochs, not just from the early Middle Ages onward.

Finally, the pre-1000 references to the kantele no more necessarily prove a staticism of form in the case of Scandinavian instruments than do early references to the crwth prove likewise about the modern instrument. Once again, looseness of terminology can be hazardous.

Conclusions

Below is a brief recapitulation of points previously made, either directly or indirectly.

1. The lyre entered Europe probably no later than the sixth century B.C. from two regions: Greece (and somewhat later, Rome) and the middle-East. Both the form of the classical lyre and the practices associated with it were absorbed by the Europeans, especially the Celts. The simpler Eastern yoke lyre, however, ultimately proved more popular than the classical instruments, and well before the end of the first thousand years of the Christian era, the non-classical instrument almost completely dominated the field except in Carolingian France and the areas under its influence. From the neo-classical lyre came the lyre-guitar (Plate 35), which survived into the nineteenth century. From the time of its initial absorption, the non-classical lyre began to undergo mutations, and by the year 1000, it existed in numerous designs.

2. About A.D. 900, instruments with independent fingerboards began entering Europe from the middle-East, to which

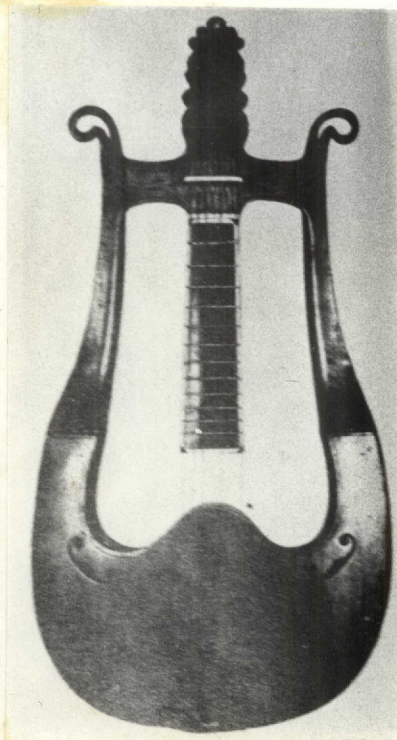


Plate 35--French fingerboard lyre (post-1700); collection of the Conservatoire Royale de Musique, Brussels.¹⁹

they originally came from Mesopotamia, probably during the third millennium B.C. Some of these instruments were plucked. Others were played with the bow, which seems to have first been used to play central Asiatic string instruments in ca. A.D. 700. The bow appears to have travelled along the trade routes to the middle-East, where it was applied to the lyres with independent fingerboards around A.D. 800.

¹⁹Anthony Baines, European and American Musical Instruments (New York, 1968), Plate 317.

3. All three classes of bowed instruments -- the central Asiatic, the Arabian and the Byzantine -- were adopted in Europe, but the popularity of the first class was never great. The middle-Eastern instruments, however, were popular throughout the Medieval period, and during the high Middle Ages there began a long, complex process which included both the evolution of the viol and the coupling of rebec holding and fingerboard techniques to the waisted fiddle. The latter facet of this process culminated in the evolution of the violin, which reached the apex of its development during the eighteenth century.

4. Around the beginning of the tenth century, the bow and probably the fingerboard were borrowed from the Eastern instruments and applied to the now well-established European lyre, which in both its bowed and its plucked forms, continued to change until about the close of the eighteenth century.

The evolution of the modern crwth seems most likely to have begun around 1250-1275 with the metamorphosis of the three-stringed bowed fingerboard lyre (Brunonis or Westminster form) into two new forms, one having four and the other six strings (represented by Wade's seal and the Worcester icon, respectively). These new instruments had crescent-shaped soundholes. The instrument represented by the Shrewsbury sculpture (Figure 6, p. 70), however, had circular soundholes, a modification probably incorporated

to allow for a fuller, brighter sound. The attempt to convert this instrument into an acoustically improved six-stringed form may have been briefly thwarted by the narrow bridge that was set between the round soundholes, but the problem was solved by widening the bridge, lengthening its left leg, and dropping this long leg through the left soundhole. This arrangement also improved the instrument's sound; the long leg transferred vibration directly to the back of the resonator. All six strings may have originally traversed the fingerboard as on the older six-stringed instrument, but the two strings on the left were eventually drawn aside and allowed to function as bourdons. This principle may have been borrowed from a round lyre of eleventh-century origin (Figure 8). The only problem is that

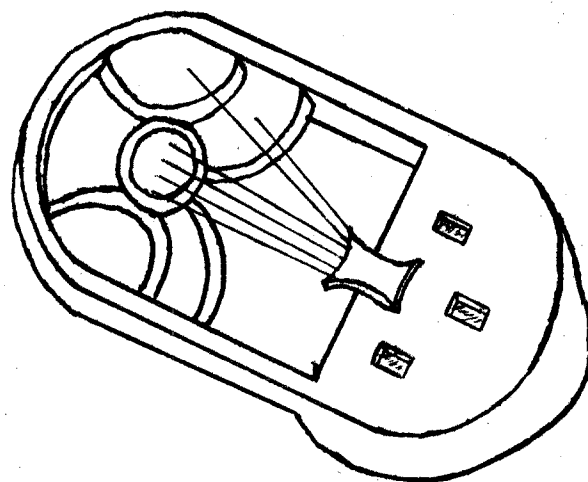


Fig. 8--Medieval round lyre with bourdons²⁰

²⁰ Re-drawn from Durham Cathedral Library MS Hunter 100, f. 62v.

there is no evidence of either the widespread popularity or the continuous use of the instrument up to the fifteenth century. The principle of the bourdons may therefore have been arrived at a second time rather than taken over from an older instrument.

By 1385, the most modern six-stringed bowed lyre probably looked much like the modern crwth but differed from it in the following ways: posterior pegs, a smaller resonator and a proportionally larger yoke, a rounded lower end, being held at the shoulder like earlier forms, and a bridge set straight across to accommodate holding and bowing methods.

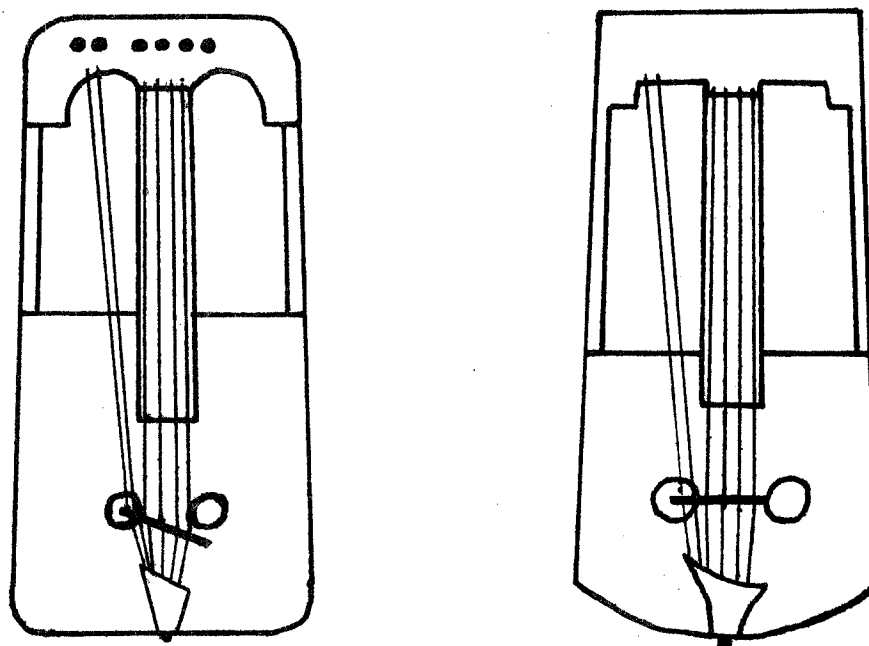


Fig. 9--Modern crwth (left) and last precedent form

The instrument probably originated on the continent. A bowed lyre fitting the above description and generally called by the Latin name, chrotta, was in use in central Europe during the fourteenth century.²¹ Plate 36 shows one of these instruments being played. There is a modern chrotta



Plate 36--Modern chrotta being played²²

²¹Edward J. Linehan, "Czechoslovakia, the Dream and the Reality," National Geographic Magazine, CXXXII (February, 1968), caption, bottom of p. 163.

²²Ibid., plate facing p. 163.

in the collection of the Gesellschaft für Musikfreunde in Vienna (Plate 37), and there is another one in the Tolbecque Collection of the Conservatoire Royale de Musique in Brussels (Plate 38). The latter instrument was reportedly

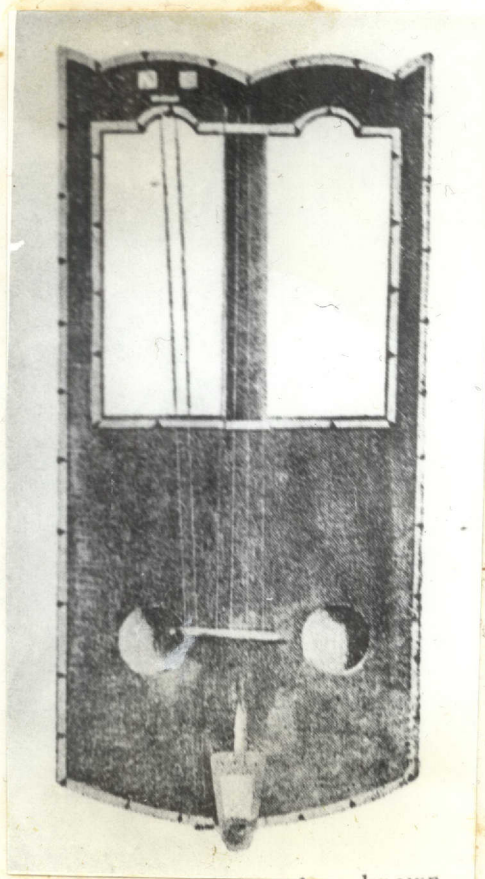


Plate 37--Modern chrotta of uncertain provenance; collection of the Gesellschaft für Musikfreunde, Vienna.²³

²³ Photograph from Otto Andersson, The Bowed Harp, p. 217.

The tailpiece of this instrument is ornamented with an engraved inset upon which is depicted what appears to be the head of a soldier. Alun Davies (Welsh Folk Museum) reports that the figure's costume is probably of seventeenth-century, south-central European origin.

made by a Frenchman who saw such an instrument represented in an old icon,²⁴ but unfortunately, additional information on this point is lacking.

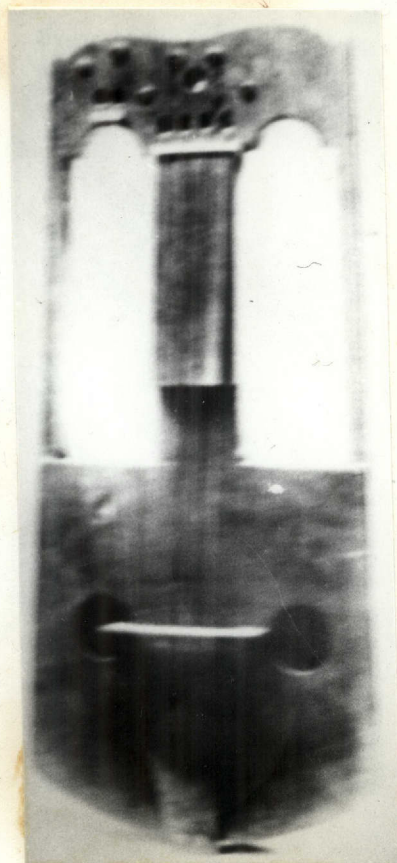


Plate 38--Chrotta in the Tolbecque Collection of the Conservatoire Royale de Musique, Brussels.²⁵

²⁴Meredith Morris, "The Crwth," p. 163. Morris reports a copy of the Tolbecque instrument to be in the Museum of Fine Arts, New York City.

²⁵Photography by the Conservatoire Royale de Musique; photograph used by permission.

Like many other continental innovations of the time, both this new instrument and its predecessors reached Britain quite some time after their development. The lyre with six central strings was probably the most advanced form in western Britain when the Worcester sculpture was carved in 1397. By 1471, when the ornaments were put onto the ceiling of the Church of Saint Mary at Shrewsbury, the improved four-stringed instrument was in great favor; and around 1505, Gruffydd ap Daffydd ap Howel wrote about the new, improved instrument with six advantageously situated strings -- one for each finger and two for the thumb -- and a frontlet formed like a wheel, or the instrument's rounded lower end.

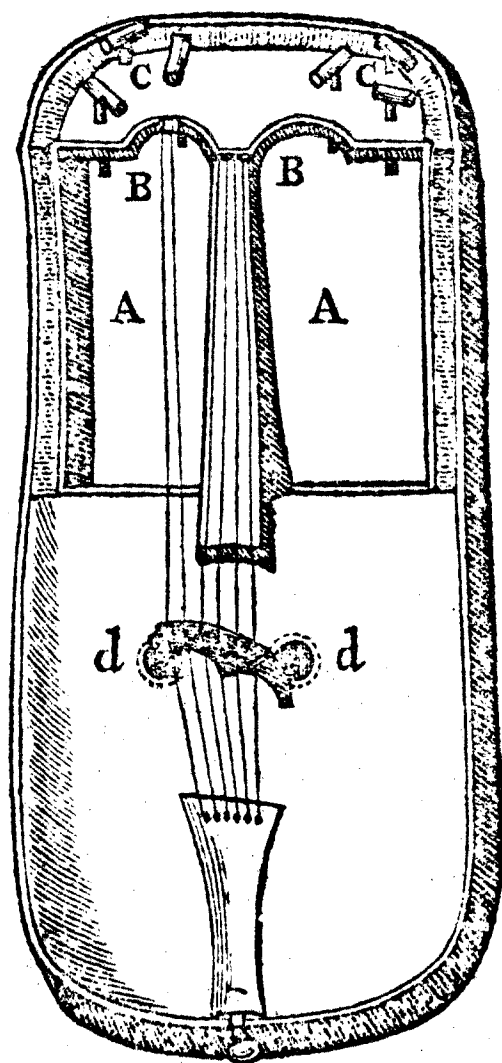
Thus it seems that the immediate forebear of the flat-ended *crwth* was introduced into western Britain about 1500, probably by the last of the minstrels, who more than likely held it at the shoulder. On the continent, the instrument was being replaced by the *lira da braccio* (Plate 39), whose *bourdons* may have been borrowed from the modern *chrotta*. It was therefore in Wales that the final modifications of the latter instrument were probably made. It was found to be easier to work the *bourdons* with the instrument held across the body, either with a neck strap or resting on the knees, and changes in both bowing techniques and bridge position followed. The rounded lower end was perhaps necessary when the instrument was held at the shoulder, but it was not



Plate 39--Lira da braccio; Ashmolean Museum, Oxford (early sixteenth century).²⁶

needed once the new positions were adopted. Neither it nor the posterior wrest pins had any effect upon the playing of the instrument. Illustrations from the eighteenth century show instruments with rounded lower ends, posterior wrest pins, and frequently both features (Plates 40 and 41, also Figure 10).

²⁶ Anthony Baines, European and American Musical Instruments, Plate 2.



AA The apertures for the hand.

BB The strings conducted under the end board.

cc The pegs.

dd The sound-holes.

Plate 40--Crwth illustrated in Leland's Collectanea (sixteenth century).²⁷

²⁷ Reproduced in John Hawkins, A General History of the Science and Practice of Music (London, 1776), II, 273.



Plate 41--Crwth and telyn; also (clockwise) pibgorn, tabwrdd and corn bueilin.²⁸

²⁸Edward Jones, Musical and Poetical Relicks, p. 41.

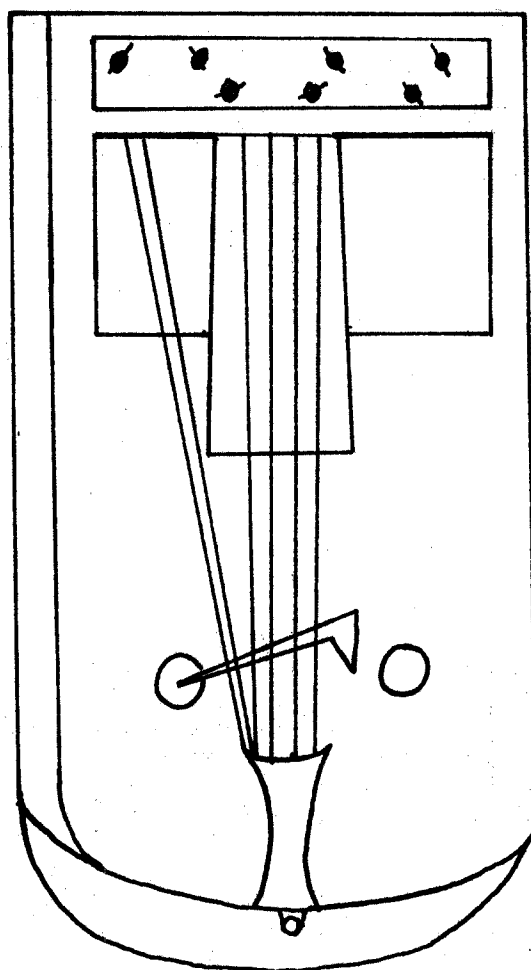


Fig. 10--Eighteenth-century sketch of a crwth,
probably by Edward Jones.²⁹

²⁹Copied from National Library of Wales MS Additional
37.B, p. 20.

Some crwth's seem to have deviated structurally from the standard pattern. Plate 41 shows an instrument with its corners cut straight across rather than rounded, and Galpin reports that an instrument exhibited at Bangor around 1860 had "only a small hole on the left-hand side of the finger-board sufficiently large to allow the thumb to pluck the two open strings."³⁰ From this report, Andersson associates the crwth directly with the narrow-holed bowed lyre,³¹ but this interpretation seems questionable. Galpin's description is probably of an instrument such as the one represented in Figure 11.

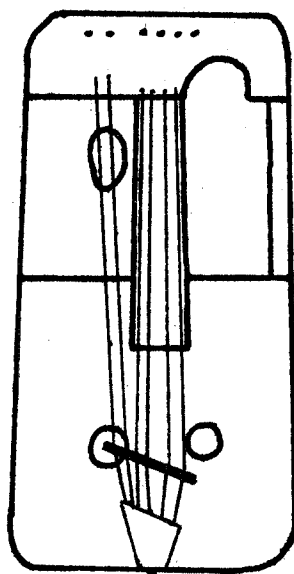


Fig. 11--Hypothetical sketch of instrument described by Galpin.

³⁰ Francis W. Galpin, Old English Instruments of Music, p. 78.

³¹ Otto Andersson, "The Bowed Harp of Trondheim Cathedral," pp. 23-24.

The bowed lyre without the fingerboard continued to exist in remote areas of Britain perhaps as late as the early nineteenth century. There are references in both Scott's The Pirate and Moffat's Shetland to a two-stringed instrument called the gue.³² In view of the strong Scandinavian influence in the Shetlands, the gue, about which nothing other than the fact of its one-time existence is known, may have been a two-stringed, open-yoke lyre.

Finally, mention should be made of the relatively recent hybrid forms which resulted from the mixture of the structural elements of early and modern instruments. One example, illustrated in Plate 33 (p. 132), is the modern, or "improved," xijukanniel, a square lyre with indented sides, fingerboard, and fairly modern soundholes and bridge. Similar modification of the waisted round lyre³³ is represented in an instrument constructed by one Hans Renqvist in the late nineteenth century.³⁴ This instrument has both the figure-of-eight shape and the open yoke of the old round lyre, but it has the concave middle bouts, the tailpiece, and the bridge of more modern instruments.

³²Ibid., p. 21.

³³See Figure 7, p. 112.

A well-known illustration of a waisted round lyre is a miniature in the prayer book of Saint Leopold, Klosterneuberg Augustiner-Chorherrenstift Bibliothek MS 987, f. 11v.

³⁴Otto Andersson, The Bowed Harp, pp. 124-125.

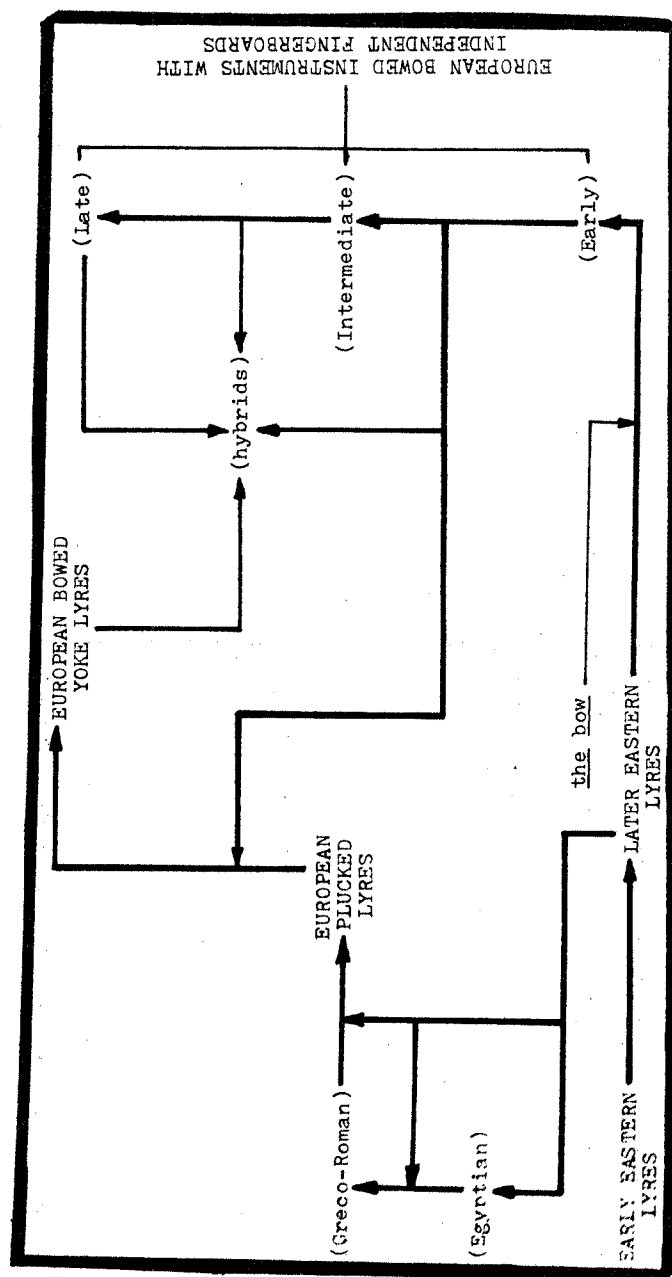
Explanation of Table XV

Table XV is divided into three large sections: right, upper left, and lower left. The right half is devoted to European bowed instruments with independent fingerboards, together with the Byzantine and Arabian instruments from which the European forms appear to have sprung. The upper left section shows the basic types of European bowed yoke lyres; in most instances, specific examples are cited. The lower left section, devoted to plucked yoke lyres, is further divisible into upper and lower halves. The upper half is that of Western lyres, and the lower half treats of Eastern instruments.

The best starting point for reading the table is the extreme lower left corner (MESOPOTAMIAN LYRES). Following the arrows from this point will enable one to see not only the geographical areas to which the lyre spread but also some of the basic structural modifications which it underwent. One should note that after the first move to the right (LATER ASIATIC LYRES) the movement of the lyre is in two different directions. Differences in time lapse are not necessarily proportional to linear distance with regard to these movements. The movements of the bow and fingerboard should also be followed carefully and at all times viewed in relationship to the movements of the lyre. A simplification of Table XV appears below as Table XIV.

TABLE XIV

SIMPLIFICATION OF TABLE XV



APPENDIX

This appendix is divided into two sections, the first of which is an illustrated, descriptive catalog of specimens of apparent pre-1850 origin, important replicas, and the Galpin crwth, which was constructed from memory by Owain Tudwr in 1895. The second section treats briefly of instruments whose origins or current existence are matters of uncertainty. Included in this section are some observations regarding the possibility of the crwth's one-time presence in North America.

Specimens, Replicas and the Galpin Crwth

The most significant measurements of each of the representative instruments examined are shown in Table XVI. Full sets of measurements are given only for the four pre-1850 specimens. Important statistics not shown in Table XVI are provided within either the descriptions or the illustrations of each instrument.

TABLE XVI

**BASIC MEASUREMENTS: SPECIMENS, IMPORTANT REPLICAS,
AND THE GALPIN CRWTH**

Instrument		Warrington	Ileyward	Gurney	Wynne Finch	London-Chanot	Norris	St. Fagan's- St. George	Aberystwyth- St. George	* Galpin
Measurements Of:										
overall length		572.5	526.2	560.0	558.8	556.0	577.0	562.5	562.5	556.0
maximum width		235.0	209.0	230.0	241.7	238.0	232.0	238.5	238.5	240.0
minimum width		190.0	196.0	214.0	216.0	219.0	195.0	218.5	218.5	240.0
average depth, resonator		45.2	42.5	46.0	47.0	43.0	40.5	44.8	42.6	38.0
fingerboard length		(260.0)	231.2	245.0	261.6	259.6	274.0	267.0	267.0	252.0
" width, max.		(38.0)	40.0	36.5	40.0	40.8	42.0	44.8	44.4	45.6
thickness of belly at soundholes		4.0	3.5	6.0	5.0	5.5	5.9	5.5	5.0	4.8
average diameter of soundholes		21.3	27.0	26.0	27.3	30.0	23.0	27.0	28.7	40.0
thickness of back under soundholes		3.0	3.2	4.3	2.0	4.3	5.0	1.8	2.5	6.0
thickness of right side of resonator		5.0	6.0	9.0	8.0	4.6	6.0	5.5	5.7	5.0
thickness of left side of resonator		5.0	6.0	9.0	8.0	4.0	5.0	5.0	5.8	5.0
thickness of upper end of resonator		13.5	8.5	21.0	13.6	12.0	23.5	23.0	21.3	5.0
thickness of lower end of resonator		12.0	8.5	20.5	24.5	4.6	6.5	3.5	4.5	5.0
string diameters	1	-	0.5715	0.8392	0.8382					
	2	-	0.9652	-	0.8382					
	3	-	1.1049	1.0414	0.7874					
	4	-	0.6112	-	0.6350					
	5	-	0.7620	1.1217	0.9652					
	6	-	1.4224	1.3118	1.1938					
vibrating lengths of strings	1	-	303.0	287.5	325.0	328.0	379.0	327.5	334.0	
	2	-	303.0	287.5	329.0	322.0	374.0	323.0	327.0	
	3	-	303.0	287.5	313.0	316.0	369.0	318.0	320.0	
	4	-	303.0	287.5	307.0	310.0	364.0	313.0	311.0	
	5	-	317.0	356.0	314.5	320.0	377.0	320.0	319.0	
	6	-	316.5	355.0	312.5	320.0	373.0	320.0	320.0	

* Statistics taken from diagram reproduced as Plate 67 (p. 233).

* Bridge apparently designed to be set straight across; otherwise, bridge set obliquely (downward slope), angle of 25°.

Specimen I

Location.--County Borough of Warrington Museum and Art Gallery; Warrington, Lancashire.

Catalog number.--R[egistrar] A[ccessions] 655.

Overall condition.--The specimen is incomplete; only the body, belly, end-pin and five wrest pins remain. There are complete fractures of the right yoke arm, the neck, the belly and back, and the pegbox. The split in the back has been splinted on the inside with a strip of monk's cloth.

With its ornately carved pegbox, its thin and delicately crafted yoke arms, and its artistically conceived lines, the instrument is an example of masterly craftsmanship. According to Alun Davies, ornamentation such as that of the yoke crown often appears on furniture made in western Britain between about 1750 and 1775, and whoever made the instrument may have had knowledge of furniture making. Davies estimates the instrument to date from ca. 1760-1765.

Other ornamentation includes an incised trim ring around each sound hole and a double trim ring which originally ran continuously around the perimeter of the instrument's front. Careless replacement of the belly after repairs were made resulted in both the misalignment of the belly and dislocation of the trim strip.

Materials and finish.--The belly is made of deal, and the body is made of maple.¹ These parts were originally stained and thinly varnished. The luster of the finish has been worn away except in a few spots. The only evidence of the missing fingerboard is a crust of hide glue on the upper surface of the neck.

History.--The instrument was given to the Warrington Corporation Museum in 1843 by James Kendrick, M.D. (1809-1882) of Warrington, and it became part of the holdings of the County Borough of Warrington Museum and Art Gallery when the former institution changed its name in 1855 and moved into the building which it currently occupies. There is no extant description of the instrument from before 1874, when an inventory was taken of the museum's holdings and the instrument was reported to be in its present condition. It was briefly removed from the museum in 1885 to be shown at an "inventions exhibition."²

According to J.R. Rimmer, museum director, Kendrick was a collector of old seals, and it is likely that he came upon the crwth during one of his many collecting expeditions.

¹According to Alun Davies, maple is common only in central Wales. Therefore, the instrument was probably made in this region.

²County Borough of Warrington Museum and Art Gallery Acquisition Card 655. The location to which the instrument was removed in 1885 is not specified.

Unfortunately, Kendrick's interest was not sufficient to result in the preparation of even the briefest record of the instrument's history prior to 1843.

Structural details.--With regard to technical aspects of the instrument's construction, attention is directed to Plates 42-46 and Figures 12-14. These illustrations follow the descriptions immediately below.

1. Pegbox: The average thickness of the pegbox is 13 mm. The estimated mean diameter of each of the wrest pin sockets is 6 mm.
2. Wrest pins: The iron wrest pins are not all of equal length, although the head designs are uniform. All pins are quite short. The lower ends of the pins are slotted rather than pierced in the common manner. There are no flanges on the pins, but a tuning key was used, as is shown by the scoring around the sockets.
3. Tailpiece, retainer, saddle and end-pin: Of these parts, only the tightly impacted end-pin remains.

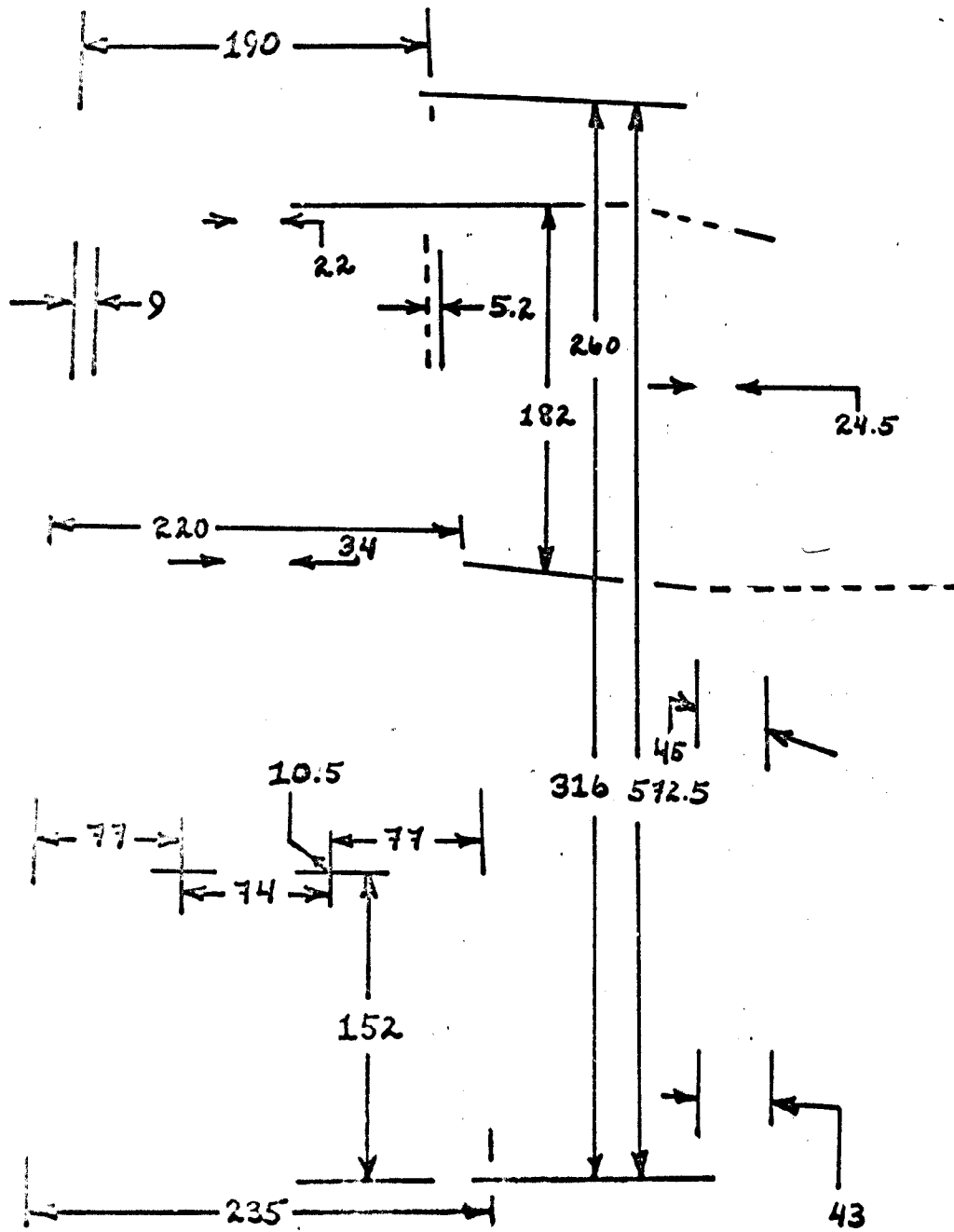




Plate 42--Warrington crwth, full frontal and three-quarter posterior; dimensions shown on overlay.

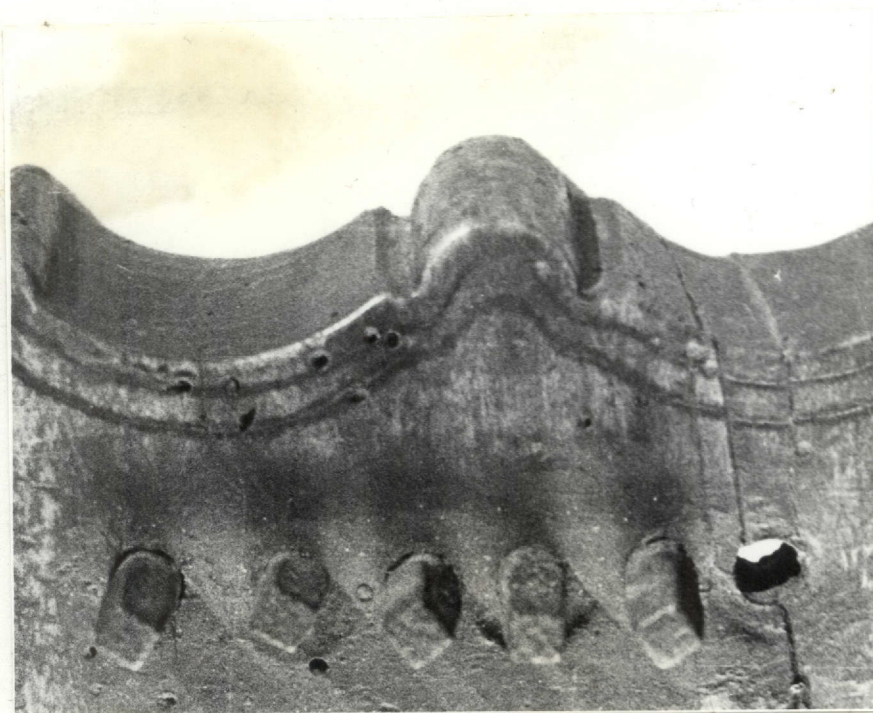


Plate 43--Detail, pegbox anterior: Warrington



Plate 44--Detail, upper neck and lower central
pegbox anterior: Warrington.



Plate 46--Lower end of wrist pin:
Warrington.

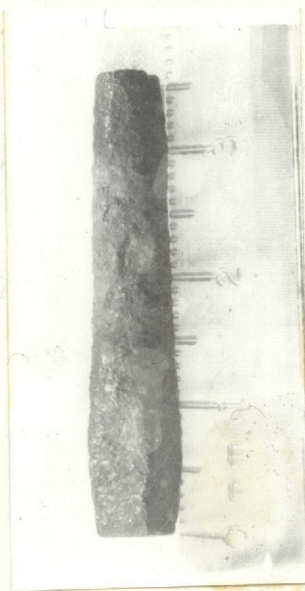


Plate 45--Wrist pin: Warrington;
numbered calibrations in centimeters.

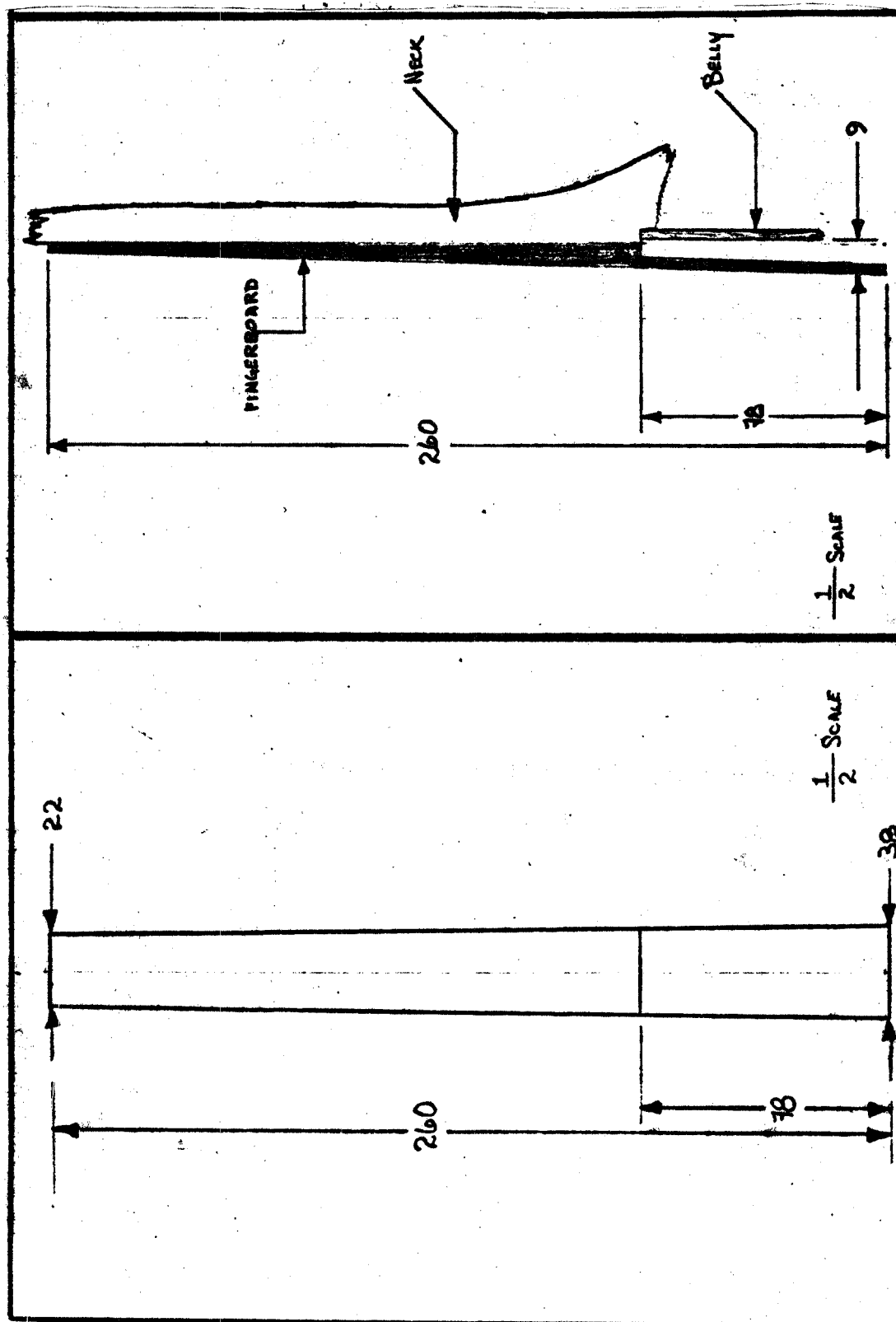


Fig. 12--Conjectural sketch of fingerboard, bottomsides (left) and right lateral; Warrington.

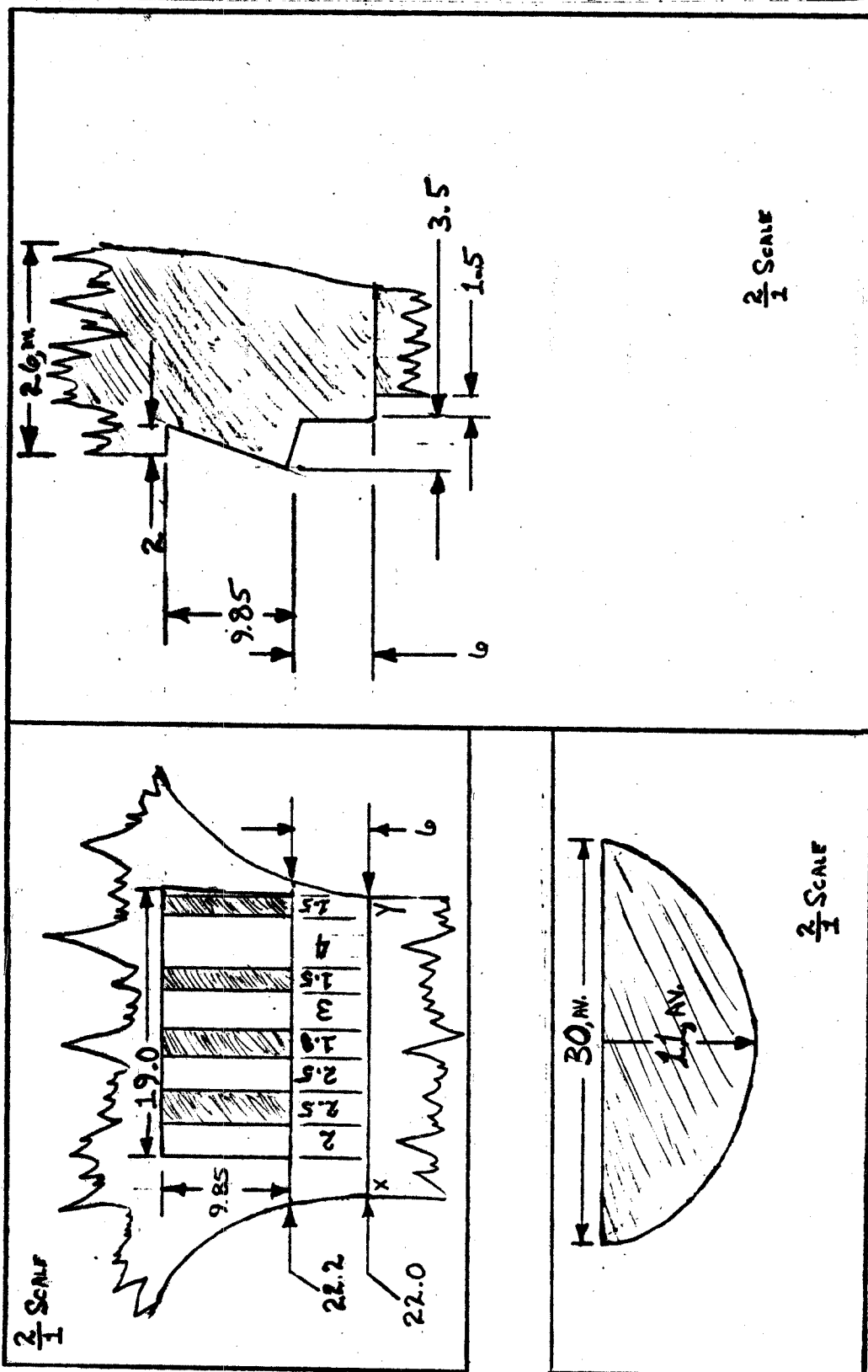


Fig. 13--Fully sectioned neck (lower left); lower central pegbox, full frontal (upper left) and right lateral, fully sectioned; Warrington.

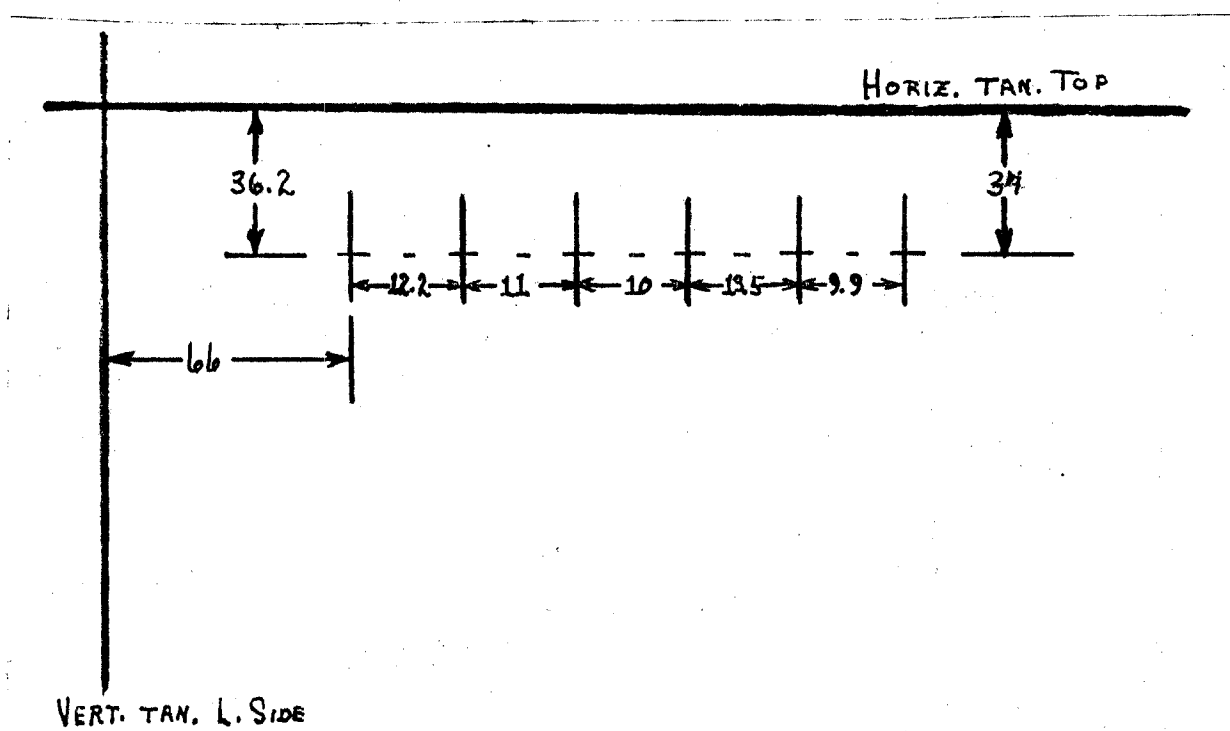


Fig. 14--Schematic, wrest pin socket situation:
Warrington.

Specimen II

Location.--Department of Prints and Maps, National Library of Wales; Aberystwyth, Cardiganshire.

Overall condition.--This crwth is in fairly good condition, although it has sustained some worm damage. Breakage of the right yoke arm and the belly has been repaired, but erosion of the wrest pin sockets and the split belly make it inadvisable to attempt bringing the instrument up to pitch.

The crwth shows signs of painstaking craftsmanship. Its extraordinary smallness suggests that it may have been made for a very small person.

Materials and finish.--The belly is made of deal. The saddle, nut, and bridge are made of cherry. The body and tailpiece are made of maple,³ and the end-pin is made of a brittle, soft wood. The fingerboard is made of what seems to be maple, but its grain differs slightly from that of the other maple parts. Body, belly, and tailpiece are stained reddish-brown, and the fingerboard is stained light brown. All wooden parts other than the unfinished end-pin, nut, saddle, and bridge are varnished.

³Like the Warrington crwth, this instrument was probably made in central Wales.

History.--This instrument, which may date from ca. 1700, may have once been owned by a Reverend John Jenkins. It was the property of a family by the name of Heyward until July 14, 1899, when it was sold at an auction of the effects of the deceased Colonel Heyward of Welshpool. An account of the sale was published in a local newspaper.

The most interesting item of the day's catalog was an old crwth, which was one of the national musical instruments of the Welsh up to the end of the seventeenth century. Bidding began at one pound, and quickly ran up to twenty pounds, when it was continued with spirit by Mr. A.S. Cooke of Newtown and Mr. Withers, a violin dealer of Leicester Square, London, and in lot, was ultimately knocked down for thirty pounds to Mr. Cooke, who was acting for Sir John Williams, M.D.⁴

The instrument was acquired by the National Library of Wales in the early twentieth century.

Structural details.--With regard to technical aspects of the instrument's construction, attention is directed to Plates 47-51 and Figures 15-18. These illustrations follow the descriptions immediately below.

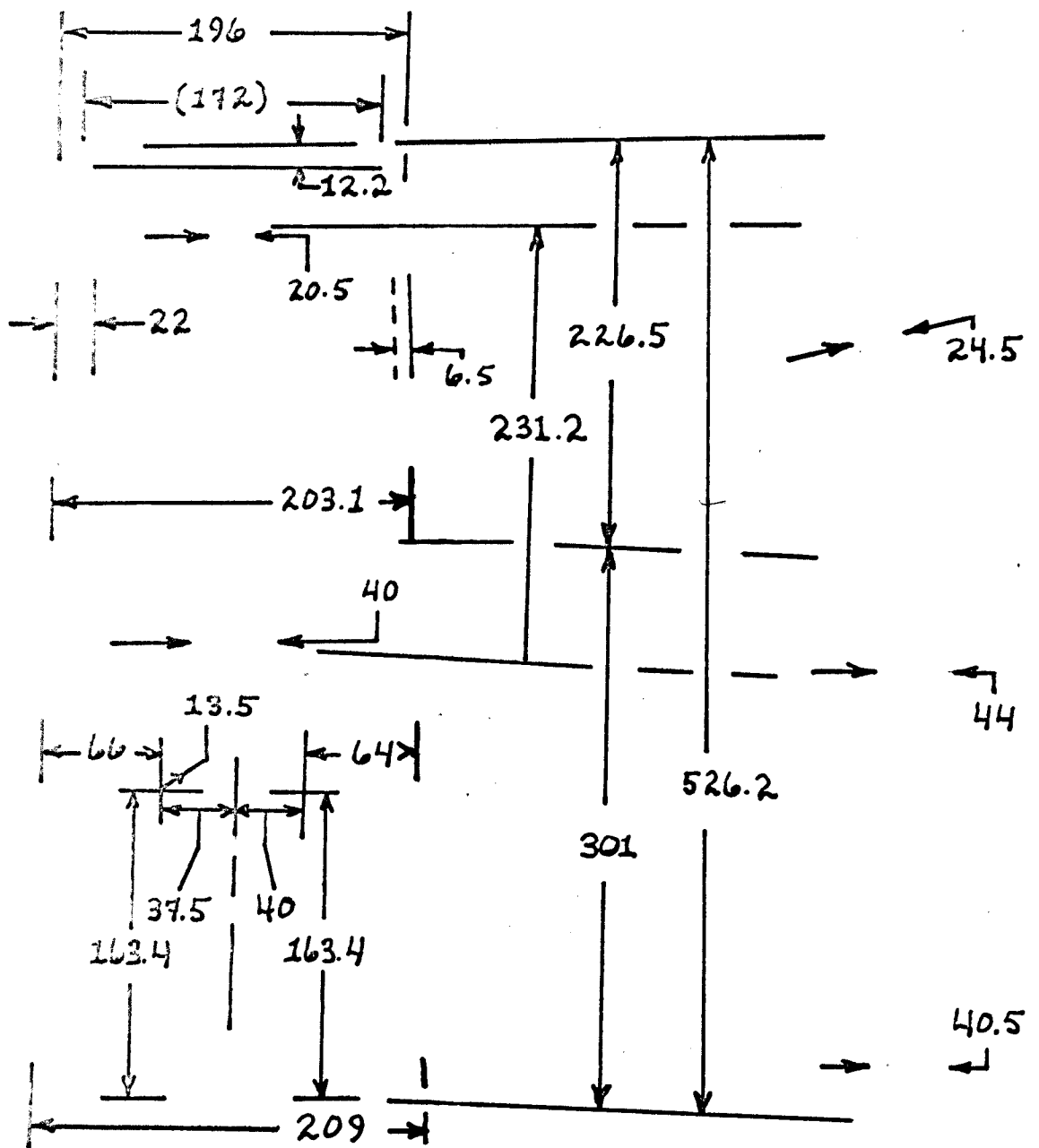
1. Neck and nut: See Plates 48 and 49; also Figure 16.
2. Pegbox: The exterior upper corners of the hand holes are ornamented. The design of the left opening points toward the possible use of a neck strap. There are tuning key marks around the wrest pin sockets. The pegbox averages 14 mm. in thickness.

⁴Quoted in Meredith Morris, op. cit., p. 158.

- Wrest pin sockets open upward from 4.3 mm. to 5 mm. String orifices average 2.8 mm. in diameter, and the strings pass through the pegbox at angles of 57° (central strings) and 62° (bourdons).
3. Fingerboard: The atypically convex and virtually unblemished fingerboard appears, in view of the age and condition of the rest of the instrument, to be a replacement.
 4. Wrest pins: Although the brass wrest pins conform to the basic design, their somewhat cruder fashioning and signs of excessive wear (worn edges and pitted surfaces) appear to indicate age equal to if not greater than that of the instrument. The pins are not all of the same design; hence some of them may be replacements.
 5. Tailpiece, retainer, saddle and end-pin: The outer edge of the upper surface of the tailpiece is beveled. Saw marks and holes which appear to have been punched with an auger indicate the use of crude hand tools. The lower front surface of the tailpiece is deeply scored in two places because the gut retainer was once drawn over the end of the tailpiece rather than threaded straight through to the underside (Plate 50). Like the nut, the saddle is unusual in that it is made of hardwood rather

than bone. The wooden end-pin, which is unusually large (Plate 51), was stuck too tightly to be extracted.

6. Bridge: The string notches are perpendicular to the sides of the bridge, indicating that this bridge was designed to be set straight across rather than obliquely. The middle foot contacts the belly. The bridge may be a relatively recent addition; an old photograph of the instrument (ca. 1930) shows it without a bridge.
7. Strings: The present strings were probably put on when the instrument was restored. From left to right, the relative thicknesses (from thickest to thinnest) are 1, 4, 5, 2, 3, 6. This arrangement best meets the string thickness requirements of the classical tuning. It is therefore possible that someone once attempted to restore the instrument to playing condition.



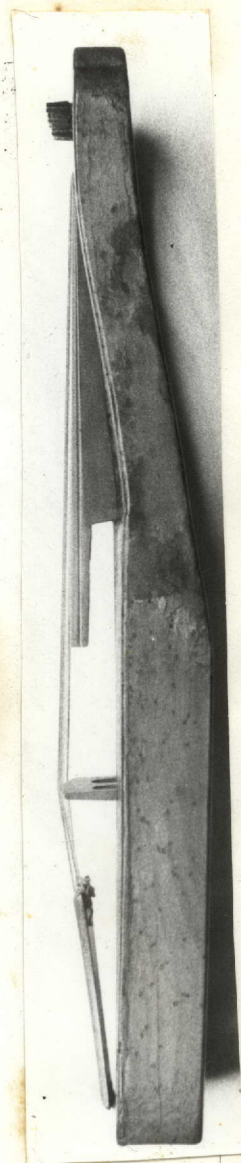
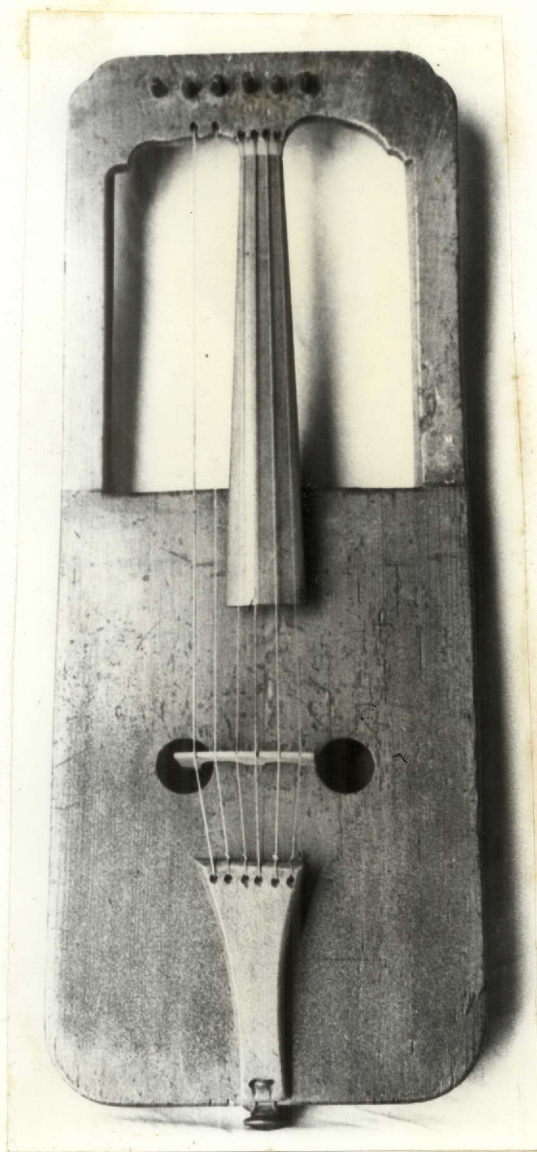


Plate 47--Heyward crwth, full frontal and right lateral;
dimensions shown on overlay.

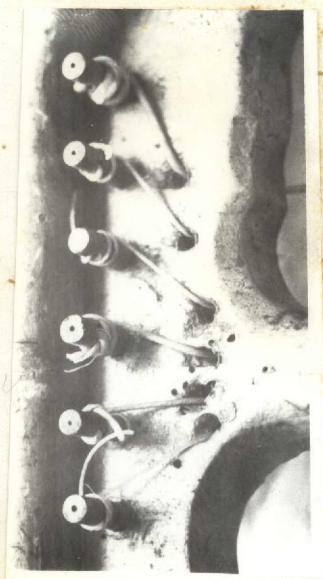


Plate 49--Detail, central pegbox
and upper neck posterior: Heyward.

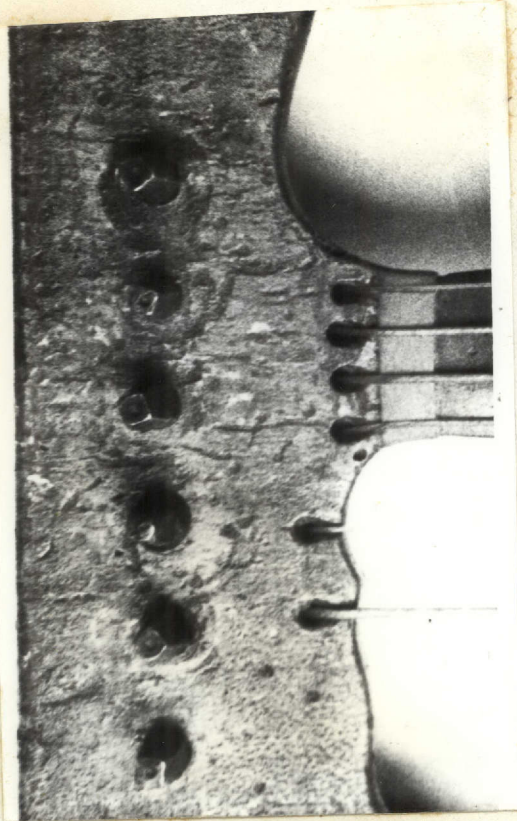


Plate 48--Detail, central pegbox
and upper neck anterior: Heyward.



Plate 51--End-pin, retainer, saddle and tailpiece: Heyward.

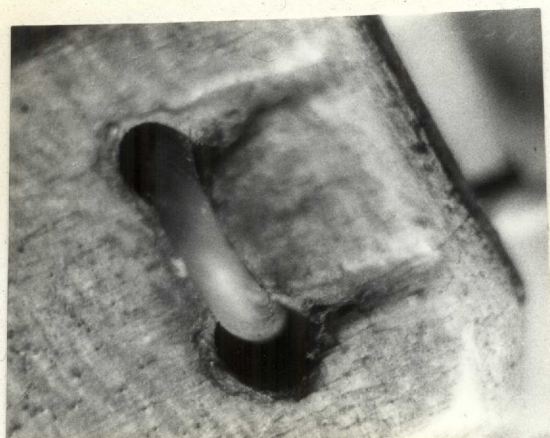


Plate 50--Lower end of tailpiece: Heyward.

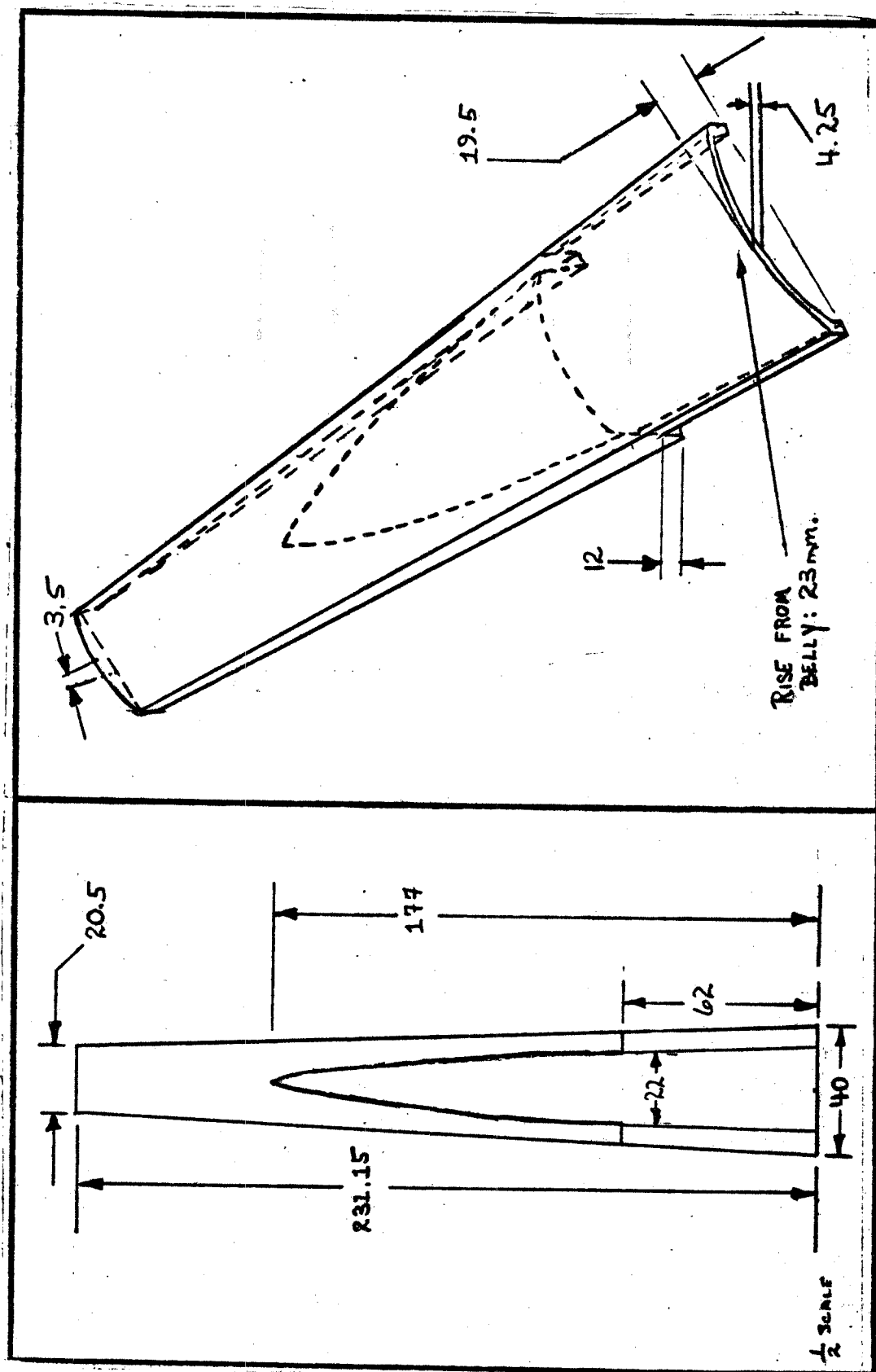


Fig. 15--Heyward fingerboard, posterior (left) and anterior

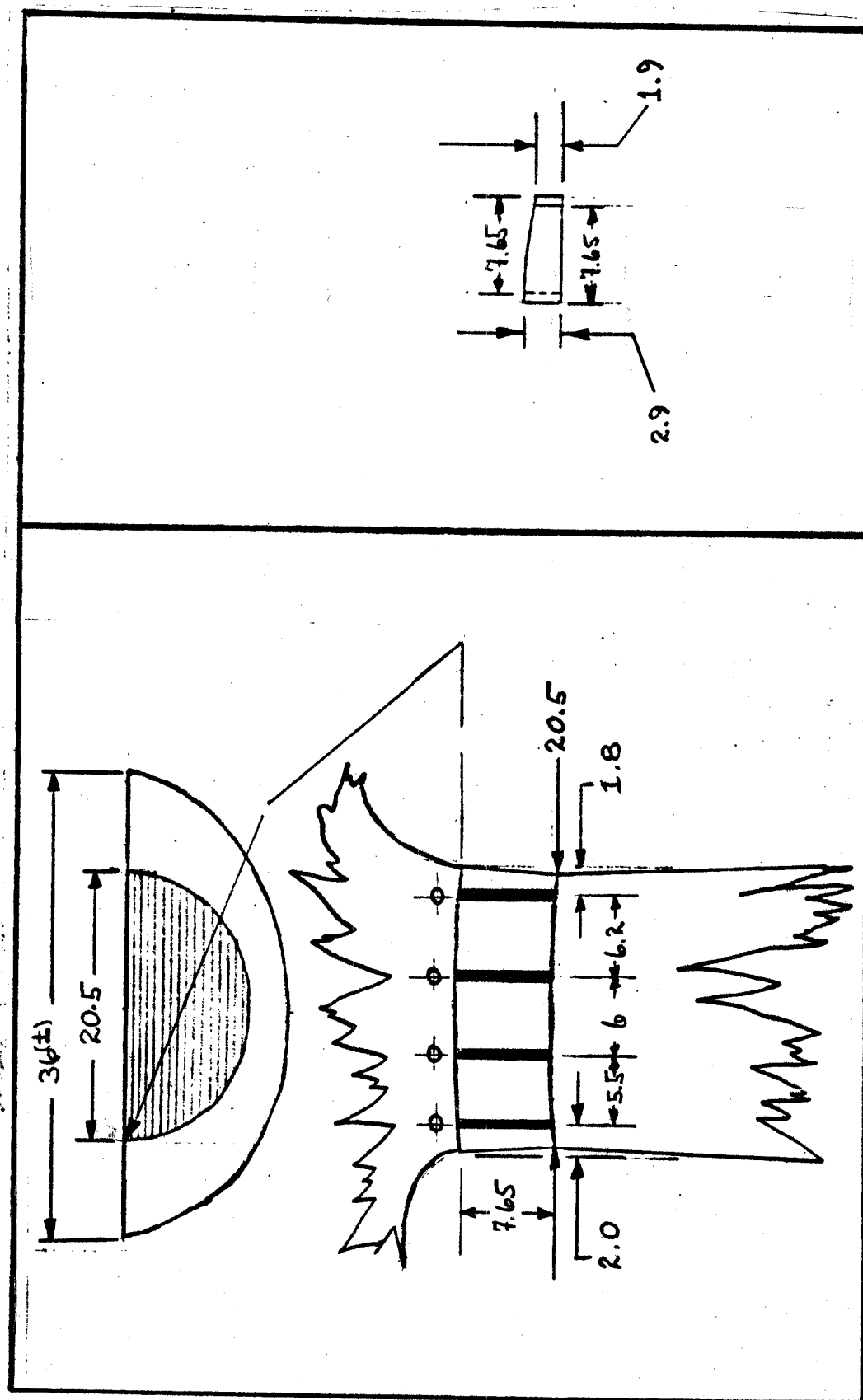


Fig. 16--Neck, full section with flare (upper left); neck/nut, full frontal; and nut, lateral right: Heyward.

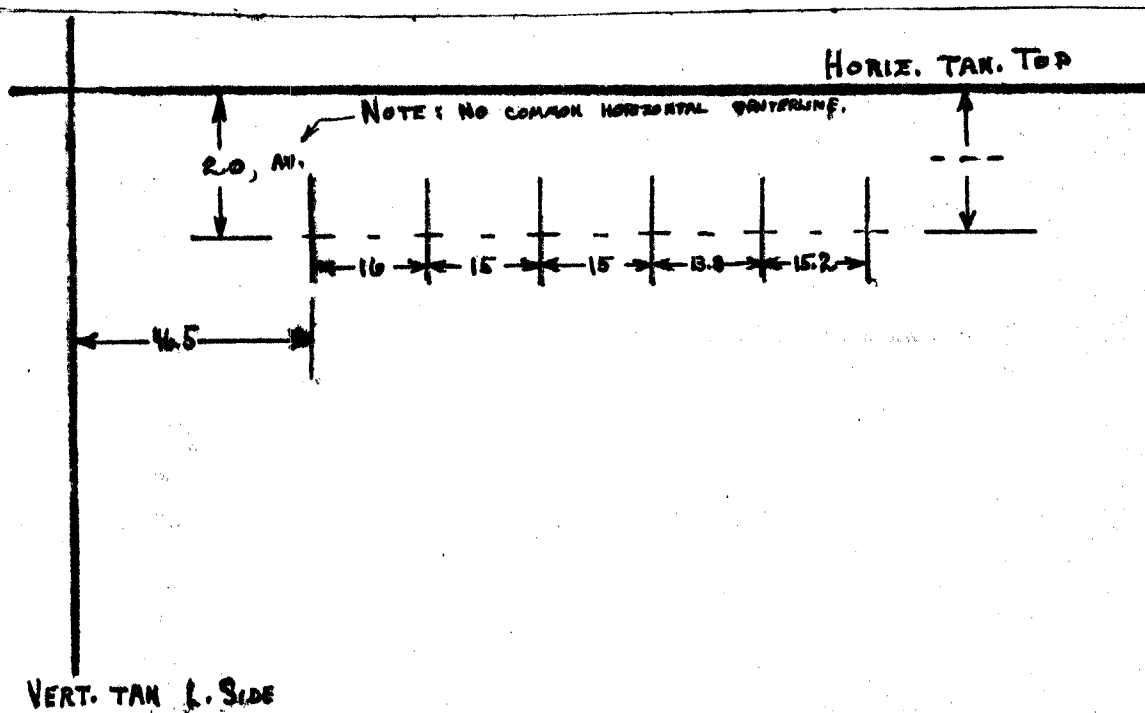


Fig. 17--Schematic, wrist pin socket situation: Keyward.

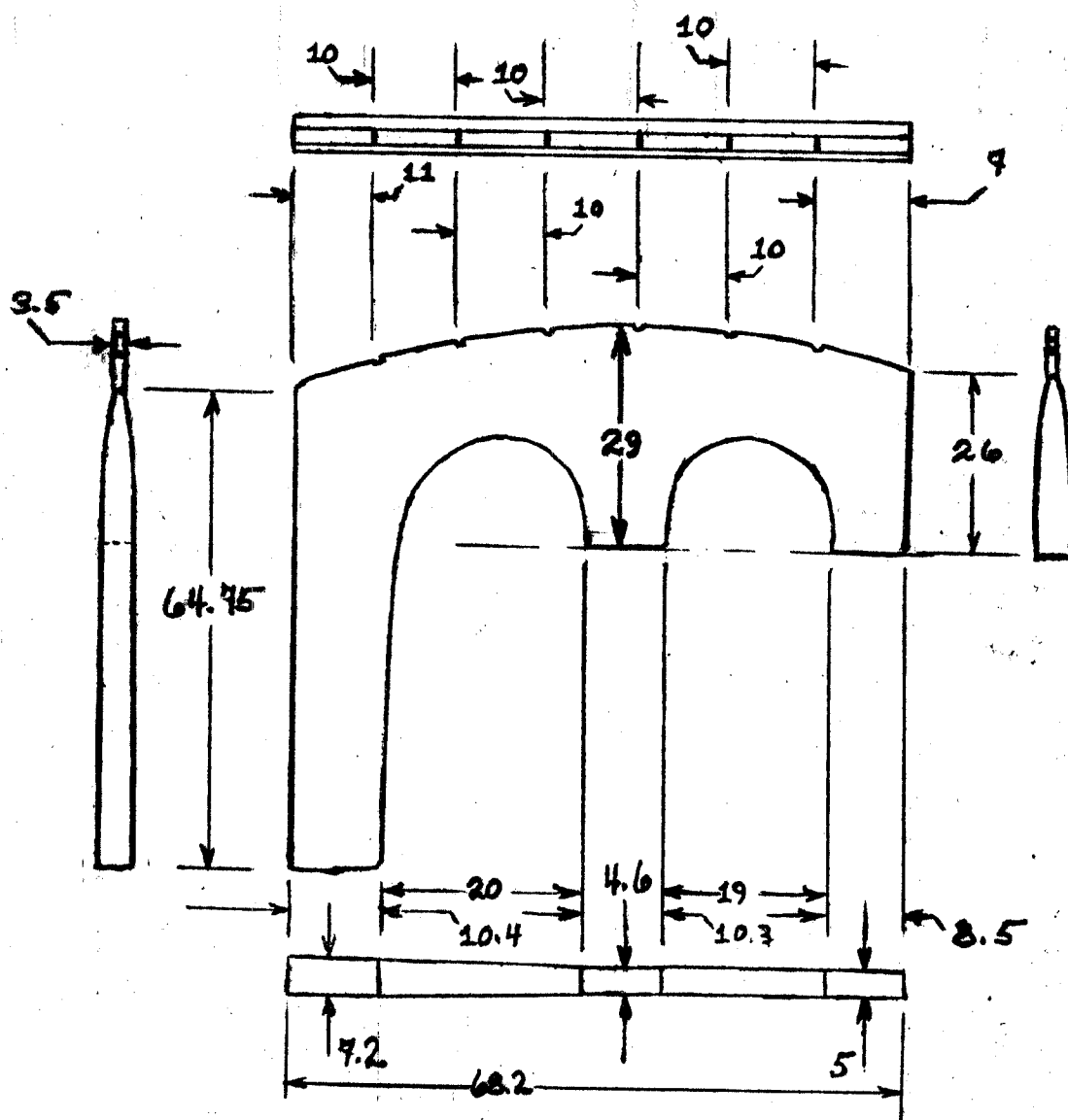


Fig. 18--Bridge: Heyward

Specimen III

Location.--Welsh Folk Museum (new unit); St. Fagan's, Glamorganshire.

Catalog number.--123.80 (P).

Overall condition.--The instrument shows signs of much usage, but except for the loss of the nut and the breakage of the bridge and tailpiece, it is in good condition. The unusually great thickness of the bridge, belly, back and sides suggests mediocre craftsmanship and probably lent the instrument a soft, thin tone. The rounded rather than squared ends of the body are also interesting.

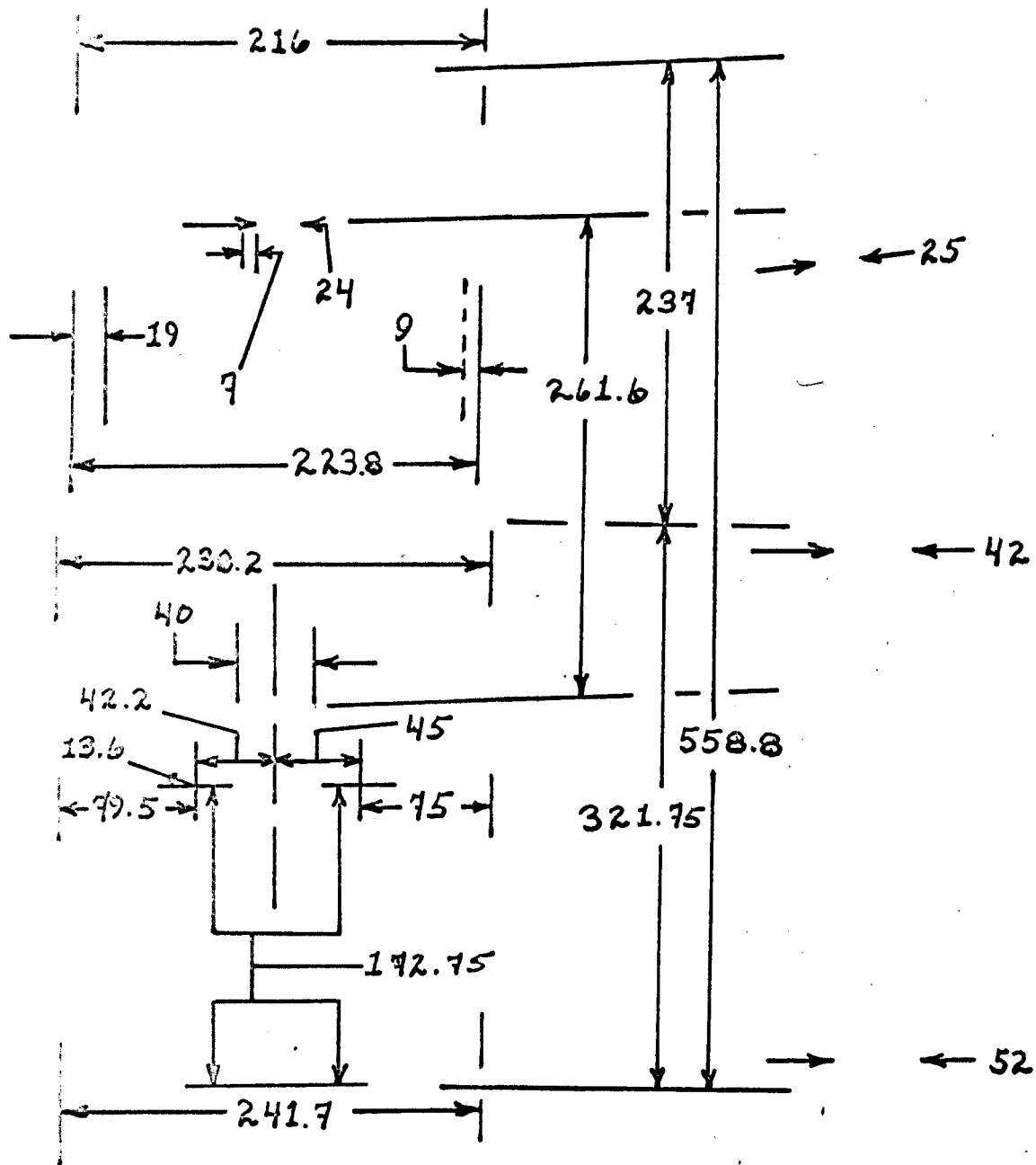
Materials and finish.--The belly is made of deal, both the body and the fingerboard are made of birch, and the tailpiece is made of what appears to be ebony. The body and belly are stained dark brown and sealed. The tailpiece, end-pin and bridge are neither stained nor sealed.

History.--According to museum records, the instrument was donated by F.G. Gurney of Egginton, Leighton Buzzard, Bedfordshire, in 1923. Nothing is known, however, of its previous whereabouts.

Structural details.--With regard to technical aspects of the instrument's construction, attention is directed to Plates 52-55 and Figures 19-21. These illustrations follow the descriptions immediately below.

1. Upper body: The missing nut was 27 mm. long, 8 mm. wide and about 13 mm. high. This instrument is unusual in that there are no bourdon orifices in the pegbox; the strings are drawn directly from the bridge to the wrest pins. The four central string orifices are bored at an angle of 65° to the upper surface of the pegbox. There are considerable signs of wear from string friction on the underside of the pegbox near the central string orifices. The average thickness of the pegbox is 16 mm.
2. Fingerboard: The birch fingerboard is stained the same color as the body. Its surface is flat, but the rise is substantially less than usual. The underside is notched in two places with deep cuts which traverse the piece horizontally.
3. Wrest pins: The brass wrest pins are of standard design; all have flanged heads. The first pin is longer than each of the other five, and it has a wider flange.

4. Tailpiece, retainer, saddle and end-pin: The tailpiece, which is held in place with a heavy wire retainer, was quite possibly taken from some other instrument. There is no saddle, and there appears to have never been one. The end-pin is made of a brittle, porous substance, and part of its outer flange has been broken off.
5. Bridge: The narrow span of the bridge and the direction of the string slots implies that the bridge was designed to be set straight rather than obliquely across the belly. The scuff marks between the soundholes were probably made after the bridge was broken, because if the center foot is allowed to rest on the belly, the bourdons touch the upper edge of the latter.
6. The first, third and sixth strings are made of gut, and the fifth string is made of silver-wound gut. The thicknesses of the second and fourth strings are inconsistent with the physical requirements of any practical tuning system.



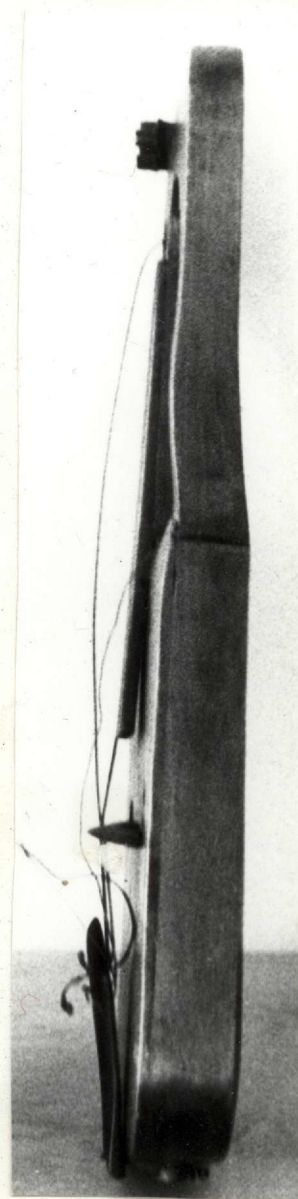
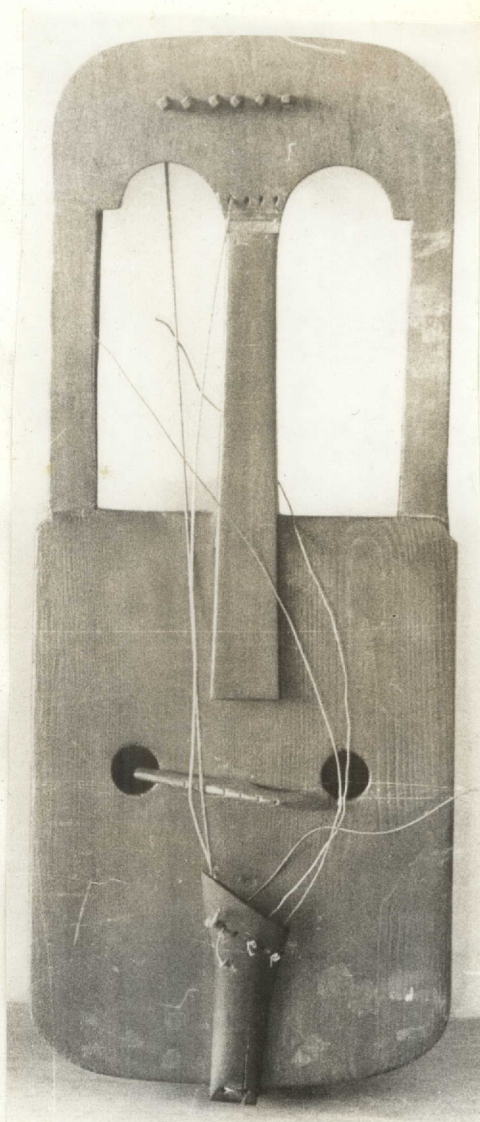


Plate 52--Gurney crwth, full frontal and right lateral;
dimensions shown on overlay.



Plate 53--Wrest pin and end-pin;
Gurney.



Plate 54--Left end of Gurney bridge,
showing where the long leg was broken off.

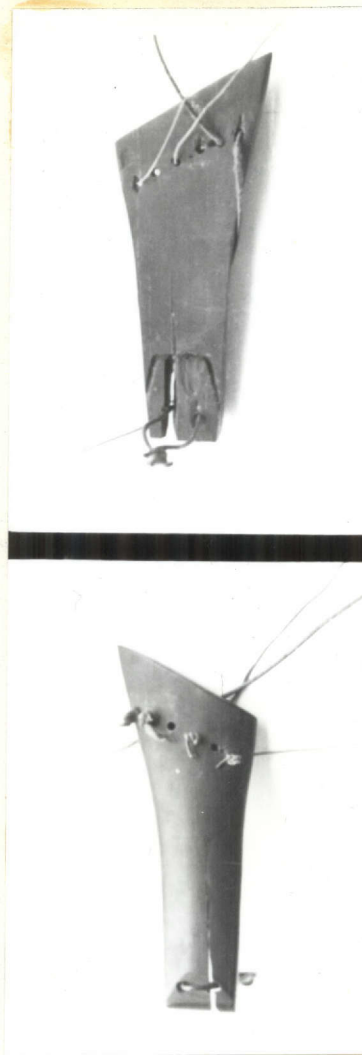


Plate 55--Tailpiece, posterior (above) and anterior views: Gurney.

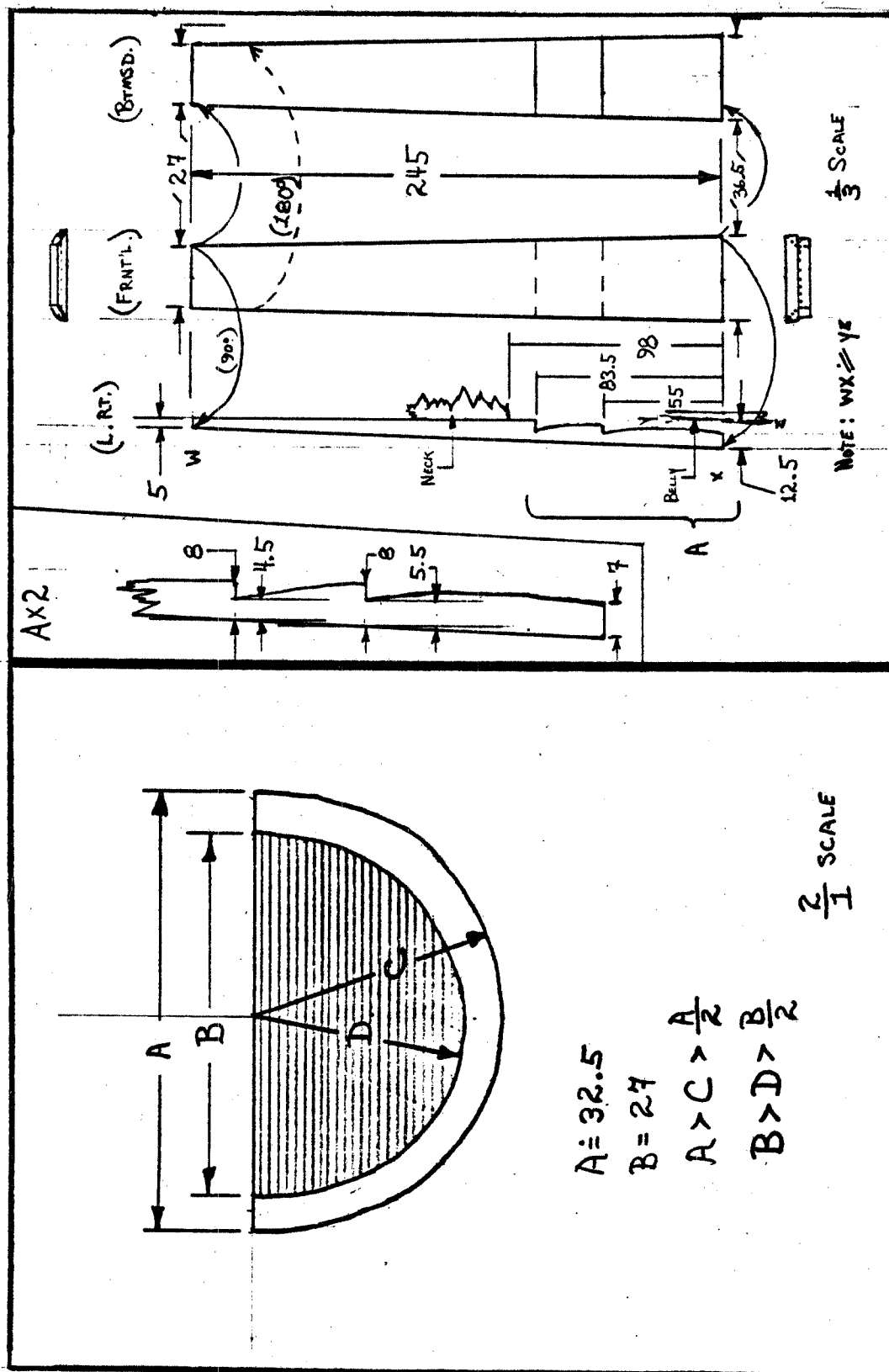


Fig. 19--Neck, full section below nut, with flare (left); fingerboard, as indicated; Gurney.

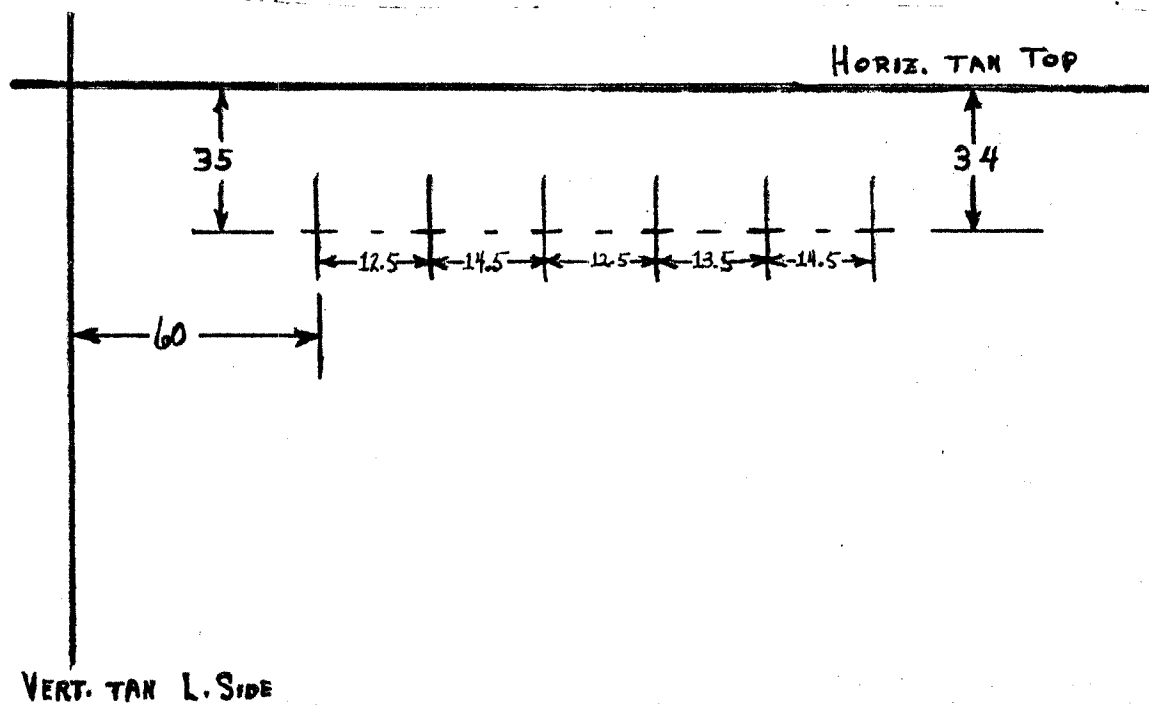


Fig. 21--Schematic, wrest pin socket situation:
Gurney.

Specimen IV

Location.--Public display case, Welsh Folk Museum (new unit); St. Fagan's, Glamorganshire.

Catalog number.--35.211.1 (L).

Overall condition.--This instrument has sustained serious damage. Its many small breaks have been mended, but the ravages of decay and woodworms have rendered it unplayable.

At some point in its life, the instrument was extensively re-worked. Five of the wrest pins were reset, and the original nut was replaced with a thinner one, necessitating the insertion of a shim between the upper edge of the fingerboard and the lower edge of the new nut. The boring of new string orifices and other repairs left the instrument in a rather patched condition (for example, the eight string orifices on the posterior side of the neck). All of this led Edward Samuelson to believe that the instrument had been strung in an unusual way.

On closely examining it, I arrived at the conclusion that it had originally been strung with wire, judging from the minuteness of its holes in the tailpiece and the iron string wrests resembling those of a lyre or harp. . . . it was first designed to carry twelve strings, though some owner had modified it by filling up half a dozen holes of the string wrests. Further evidence is found in the bridge,

constructed to carry twelve strings. . . .
The tailpiece and fingerboard appear to have been
introduced after the strings were reduced in number.⁵

It would seem that the instrument's present condition is due to repair rather than modification, especially since an instrument of its size and design would have been virtually impossible to play if strung as Samuelson conjectures. Even the wider fingerboard which the instrument may have once had would not have alleviated the difficulty.

Morris postulates that the instrument originally had only one bourdon, basing his belief on the present condition of the instrument's pegbox.⁶ It is probable that Morris also mistook signs of repair for signs of re-designing. Two bourdons appear to have been standard about two hundred fifty years before the instrument was made.

Materials and finish.--The body, fingerboard and tailpiece are made of sycamore. The belly is made of deal, and the bridge is made of cherry. The end-pin, saddle, nut, and friction bars above the string orifices on the posterior side of the pegbox are made of bone. All wooden parts except the bridge are lightly stained, and all but the bridge and fingerboard have a fairly fresh coat of gloss varnish.

⁵Edward Samuelson, "On the Cultivation of Music, Chiefly Instrumental, in the Principality," cited without additional references in Meredith Morris, op. cit., p. 155.

⁶Meredith Morris, op. cit., pp. 155-156.

Underneath this fresh coat of sealant, lodged in the many small pits on the surface of the belly, is the dark residue of an older coat of varnish. This gives the instrument a distinctive, mottled appearance.

History.--A label on the inner surface of the back of the resonator reads:

Maid in the paris⁷ of
Anirhengel⁸ by Richard
Evans Instruments maker
In the year 1742.

Some, considering the instrument's condition, have contended that it was merely repaired by Evans. Such an argument is of little substance, however, since much use and even slight exposure to the elements in a humid climate could have reduced the instrument to a poor condition.

The crwth was found in Anglesey in the second half of the nineteenth century, and shortly thereafter, it became the property of Colonel J.C. Wynne Finch of Voelas, Bettws-y-Coed, Caernarvonshire. According to Engel, the instrument was lent to the South Kensington Museum, London, around 1871.⁹ Although some repairs may have been made

⁷ ? parish

⁸ ? Llanfinhangel-Bachellaeth, Caernarvonshire

⁹ Carl Engel, A Descriptive Catalog of the Musical Instruments in the South Kensington Museum (London, 1874), p. 294.

in 1871,¹⁰ the only other positive indication of the instrument's whereabouts prior to its acquisition by the Welsh Folk Museum in 1935 is the brief account of Chanot's restorative work of 1872.¹¹

The new string orifices appear to have been crudely punched with a hand auger. This, coupled with the aged and worn condition of the other repairs, would lead one to suspect that these alterations took place before 1871-1872, especially since the instrument has been used only for display purposes since that time.

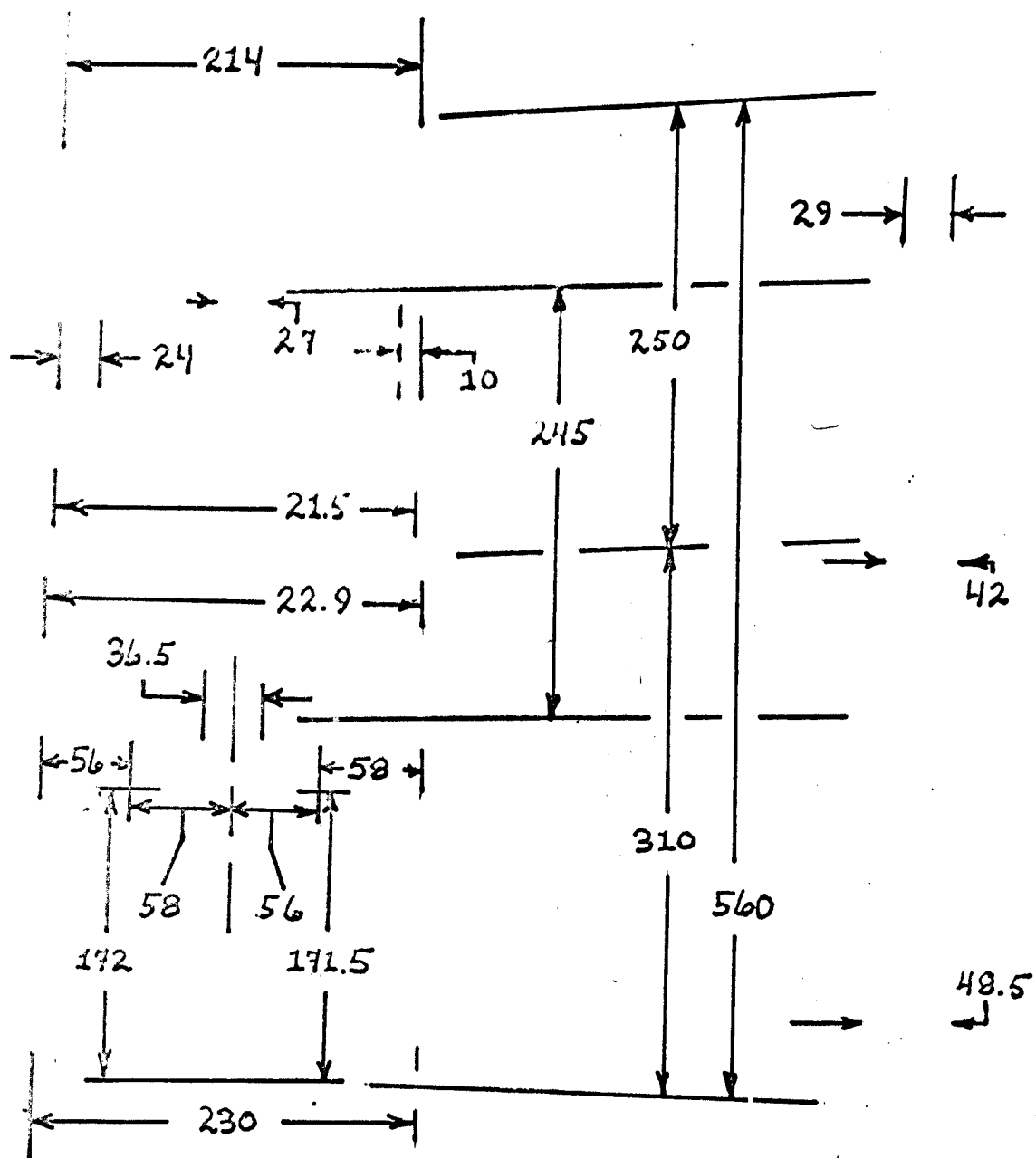
Structural details.--With regard to technical aspects of the instrument's construction, attention is directed to Plates 56-59 and Figures 22-24. These illustrations follow the descriptions immediately below.

1. Pegbox: The average thickness of the pegbox is 10.9 mm., and its lower back edge is beveled. The new wrest pin sockets, which appear to have been bored with a crude twist drill, open upward from 6.5 to 7 mm. String orifices now in use lie at angles of 57° (central) and 70° (bourdon) to the upper surface of the pegbox.

¹⁰A.J. Hipkins, Musical Instruments, Historic, Rare and Unique (Edinburgh, 1888), p. 48.

¹¹Anthony Baines, Non-Keyboard Instruments, Vol. II of Catalog of Musical Instruments in the Victoria and Albert Museum, 2 vols. (London, 1968), p. 19.

2. Fingerboard: The fingerboard, whose lower posterior surface is concave, has a notched underside like the fingerboard of the Gurney instrument.
3. Wrest pins: The wrest pins show much wear. They have no flanges, their lower ends are slotted, and a cross is cut into the top of each pin.
4. Tailpiece, retainer, saddle and end-pin: The quadrilateral tailpiece is flat on both sides and is straight-sided. The gut retainer and the bone saddle are in no way unusual. The bone end-pin is highly polished.
5. Bridge: The bridge is made in accordance with the standard pattern. All three of its feet rest squarely upon the proper surfaces. Saw marks and roughly cut string notches indicate that the bridge was probably hand made. Both sets of notches were cut so that the bridge could be set in the traditional position. The bridge provides very little drop for the bourdons; hence the bourdons could have been bowed if the player so desired.
6. Interior braces: The belly is braced with two small wooden brackets which are placed midway along the interior sides.
7. Strings: The strings are of gut, but except for the two bourdons, they do not appear to have been



installed with regard to tuning requirements. The first and second strings are of the same thickness and are each thicker than either the third or fourth string.

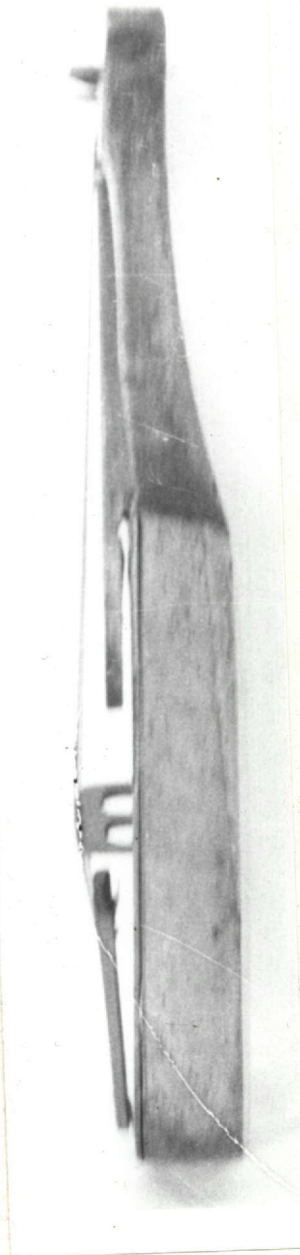
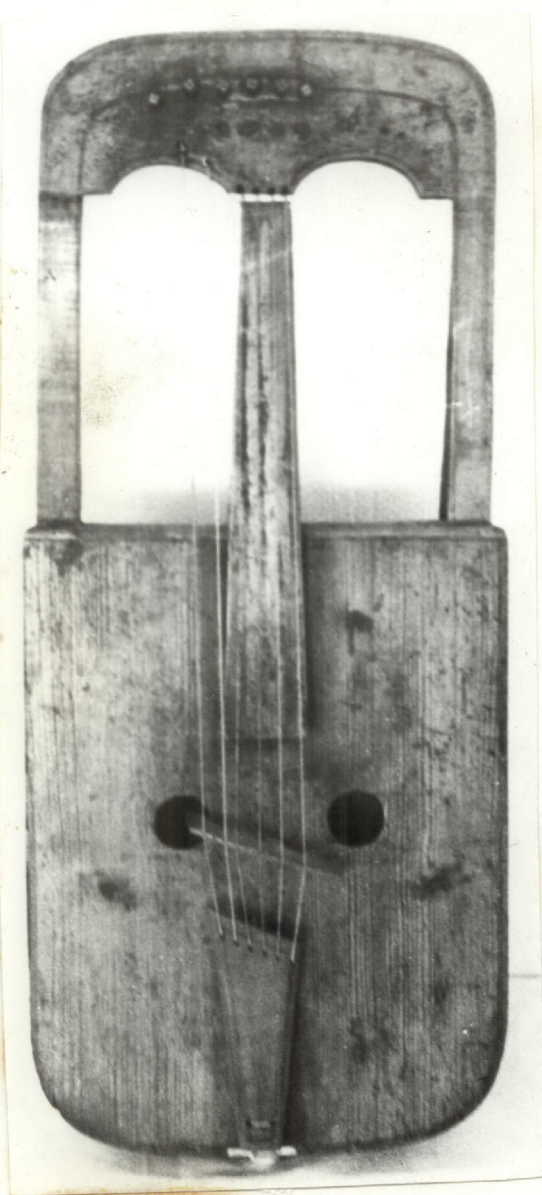


Plate 56--Wynne Finch crwth, full frontal and right lateral; dimensions shown on overlay.

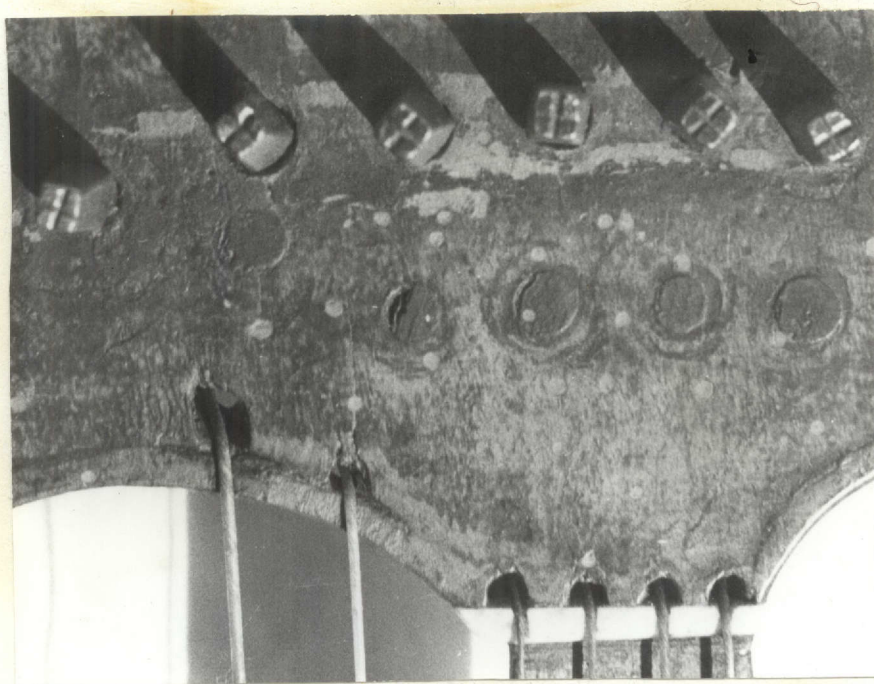


Plate 57--Central pegbox anterior: Wynne Finch

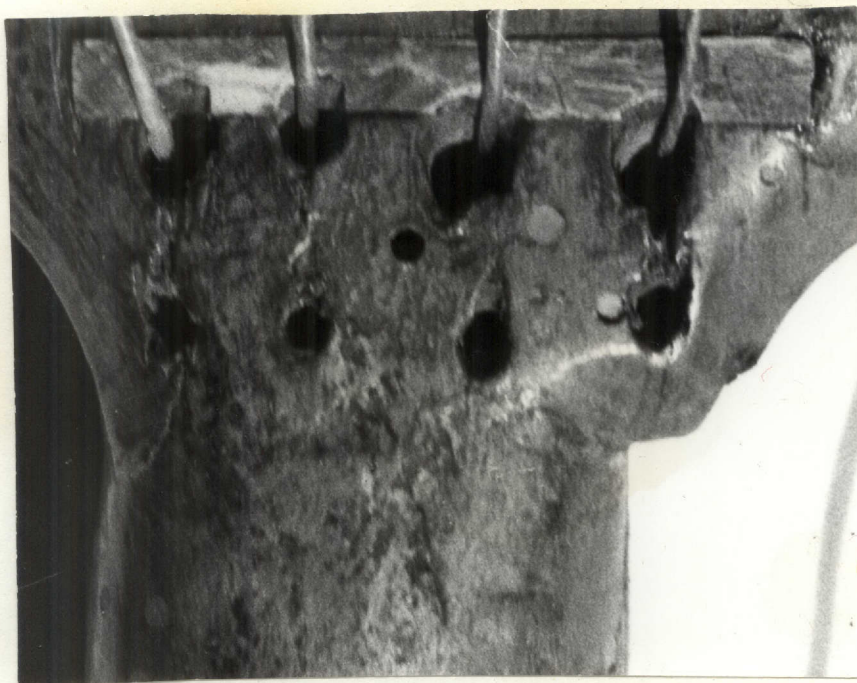


Plate 58--Upper neck posterior: Wynne Finch



Plate 59--Bridge: Wynne Finch

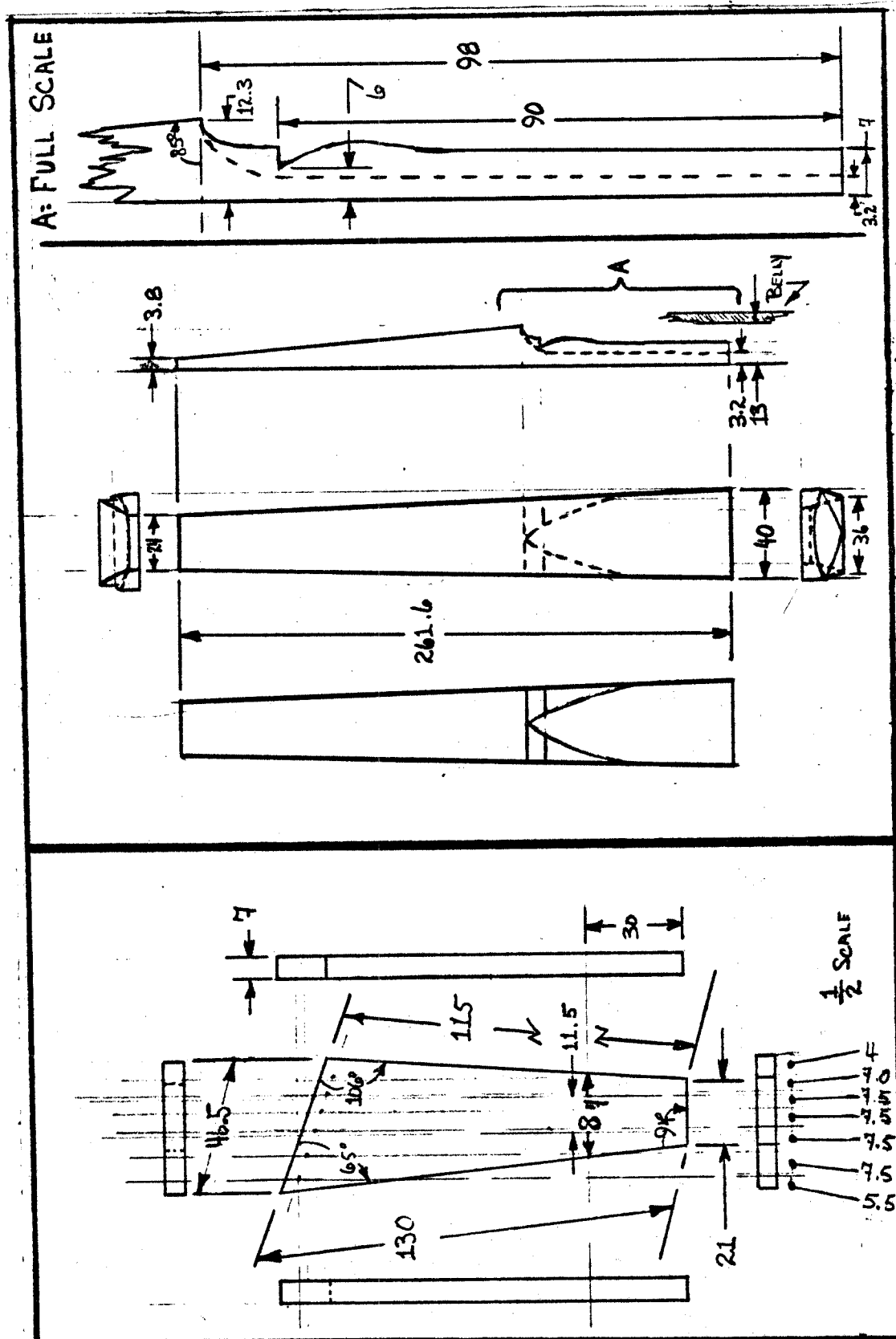


Fig. 22--Tailpiece, full frontal, sides and ends (left); and fingerboard, faces and right lateral with detail: Wynne Finch.

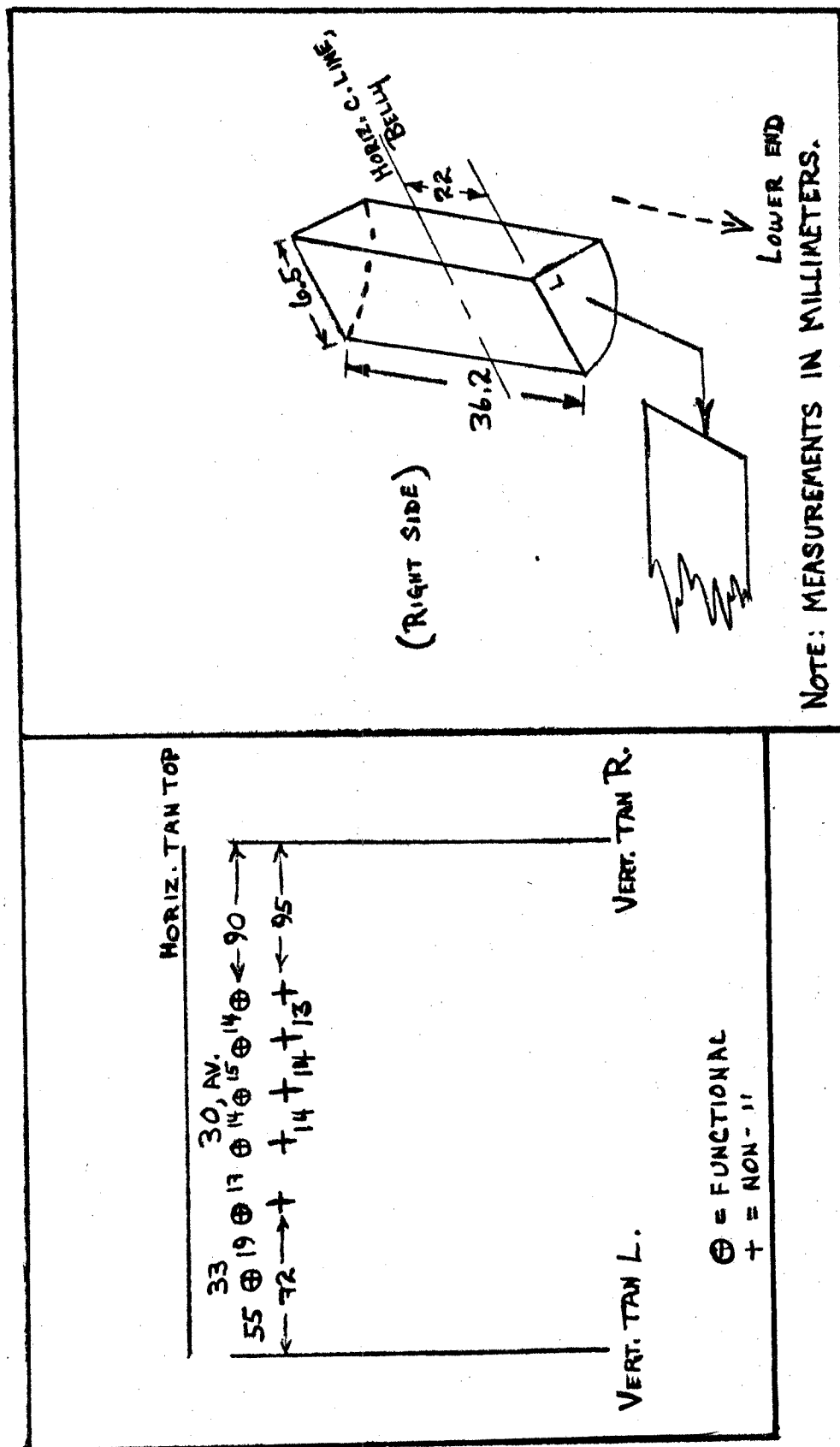


Fig. 24--Schematic, wrist pin situation (left) and interior belly-brace: Wynne Finch.

Replica I

Location.--Department of Furniture and Woodwork,
Victoria and Albert Museum; London.

Catalog number.--175-1882.

Overall condition.--This instrument is one of several duplicates of the Wynne Finch crwth which were made by Georges Chanot of London from about 1872. Most of its measurements closely approximate those of the Wynne Finch instrument, but except for a few dimensions of secondary importance, the Chanot instrument is slightly smaller than its prototype.

Compared to the original specimens described above, this instrument is in very good condition. It appears to have been made with something other than crude hand tools, but without consistent care, as may be seen from the unequally thick sides and the unequal lengths of the center and right feet of the bridge.

Materials and finish.--The belly is made of deal. All other wooden parts except the cherry wood bridge are made of sycamore and, together with the belly, are stained brown; all save the fingerboard are varnished. The nut and end-pin are made of polished bone; so is a trim strip which is inlaid horizontally across the top of the belly.

History.--Baines reports that the date of the instrument's origin is uncertain, suggesting that the instrument may have belonged to Carl Engel.¹² It seems, however, that Engel's crwth, also a Chanot instrument, has been in the collection of the Conservatoire Royale de Musique, Brussels, from at least 1920.¹³ Therefore, all that can be definitely said of the instrument in the Victoria and Albert Museum is that it was made by Chanot no earlier than ca. 1872 and became part of the museum's holdings in 1882, as is indicated by the catalog number.

Structural details.--With regard to technical aspects of the instrument's construction, attention is directed to Plate 60 and Figure 25. These illustrations follow the descriptions below.

1. Pegbox: The upper surface of the pegbox lies above that of the rest of the yoke, but it rises more sharply than does that of the Wynne Finch crwth. The maximum thickness of the pegbox is 12 mm., and the lower back edge of the pegbox is beveled. Neither the strings nor the wrest pins could be removed, and therefore no measurements of either

¹²Anthony Baines, Non-Keyboard Instruments, pp. 19-20.

¹³Meredith Morris, op. cit., p. 163.

the string orifices or the wrest pin sockets are available.

2. Fingerboard: The lower underside of the fingerboard is both concave and notched.
3. Wrest pins: The iron wrest pins are standard.
4. Tailpiece, retainer, saddle and end-pin: The tailpiece has beveled upper edges, and the back part of its leading edge is slightly concave. The retainer is made of gut, and the saddle is missing. The end-pin could not be extracted for close examination, but it appears to be made of polished bone. Its design is slightly different from that of the Wynne Finch instrument.
5. Bridge: The bridge is of standard design, but its poor adjustment keeps it from resting squarely upon its feet and causes the middle foot to clear the belly by approximately 2 mm.
6. Strings: The instrument is currently strung with nylon strings for display purposes.

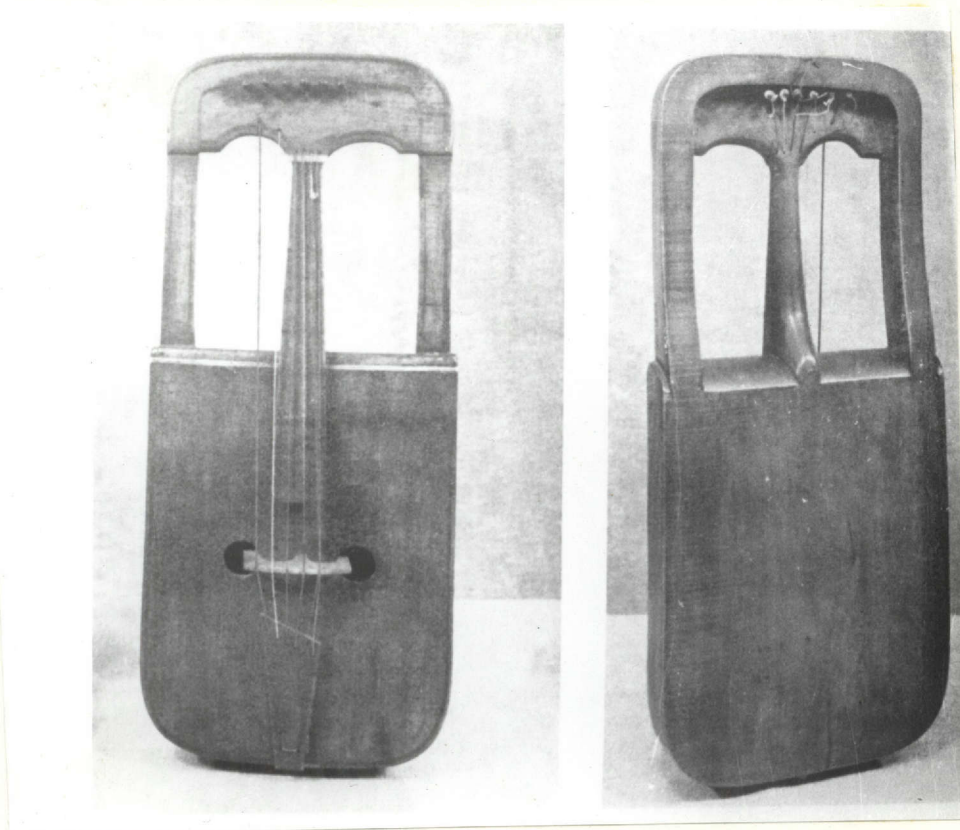


Plate 60--Chanot replica, Victoria and Albert Museum;
full frontal and posterior.

¹⁴Anthony Baines, Non-Keyboard Instruments,
Figure 3/11 (no pagination of illustrations).

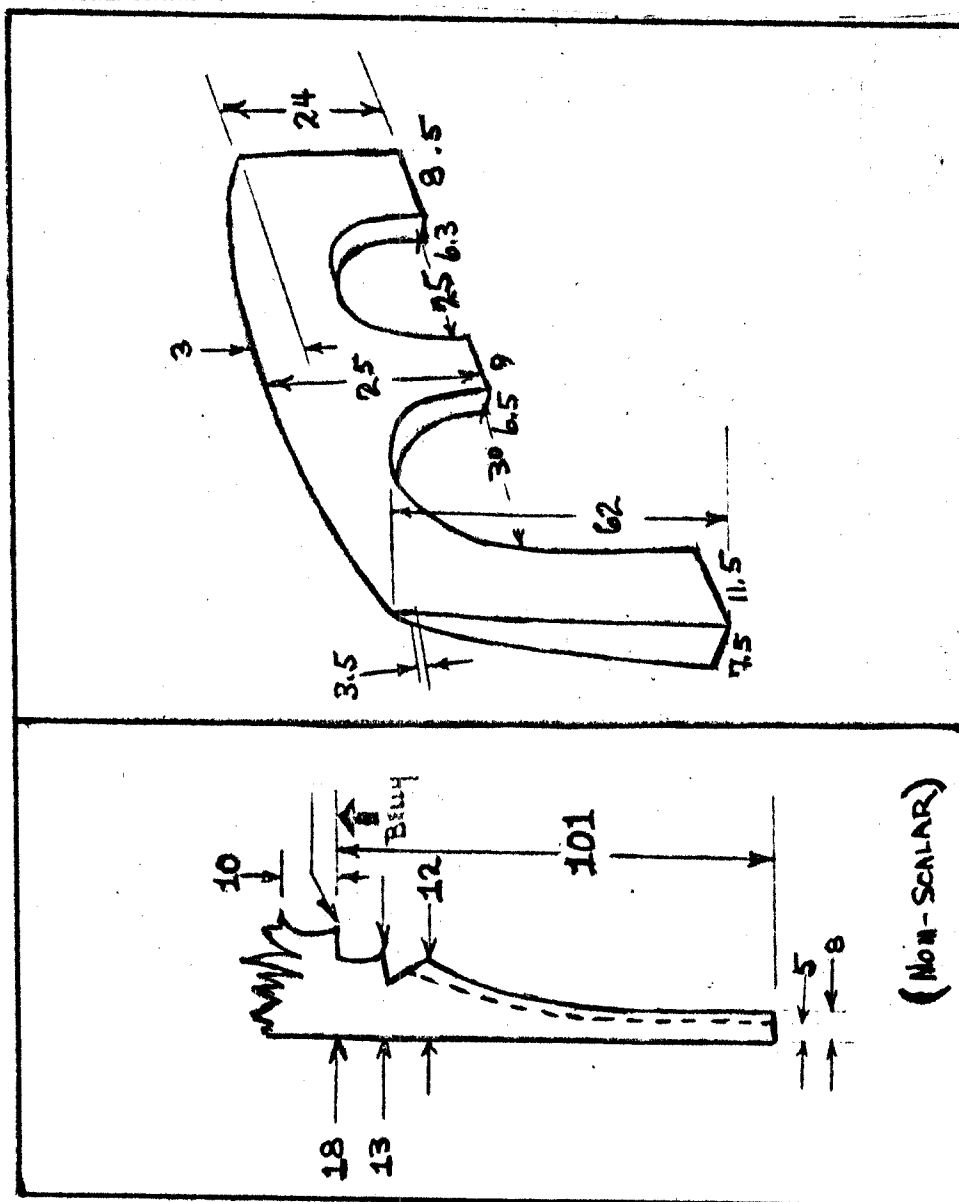


Fig. 25--Detail, lower end of fingerboard (left); bridge: London Chanot

Replica II

Location.--Welsh Folk Museum (new unit); St. Fagan's, Glamorganshire.

Catalog number.--13.76 (P).

Overall condition.--This instrument is one of an undetermined number of G. Saint-George's replicas of the instrument in the Victoria and Albert Museum. Saint-George was active in London during the early years of the twentieth century.

This crwth is in exceptionally good condition and would be playable if restrung. Like the Chanot instrument described above, this replica is ornamented with a trim strip inlaid across the top of the belly. It is somewhat larger and heavier than the London instrument, however, and except for a few secondary dimensions, it is also larger than the Wynne Finch crwth.

Accessories include a wooden-handled harp tuning key and a short bow with stationary frog (Plate 62). In view of what appear to have been the proper crwth holding and bowing techniques, both the design and the functionality of the bow are questionable.

Materials and finish.--The belly is made of a hard, fine-grained pine, and the body is made of birch. The nut, saddle and trim strip are made of bone; the bridge and fingerboard are made of cherry. The tailpiece appears to be made of maple, and the end-pin is made of a light, brittle wood of indeterminable type. Body, belly, tailpiece and fingerboard are stained a garish green, and all wooden parts except the fingerboard, bridge and end-pin are sealed with a thick coat of high gloss varnish.

History.--A label inside the instrument reads:

G. Saint-George
London, A.D. 1912.

An acquisition card in the museum's files indicates that Saint-George was both maker and donor of the instrument, which was acquired in 1913. The instrument was probably made for the National Museum of Wales, Cardiff, which was the holder of items now in the Welsh Folk Museum prior to about 1930, when the latter institution opened.

Structural details.--With regard to technical aspects of the instrument's construction, attention is directed to Plates 61-62 and Figures 26-27. These illustrations follow the descriptions below.

1. Pegbox: The pegbox is clearly set off from the yoke rather than blended into it and thus at first glance appears to be of separate construction.

The maximum thickness of the pegbox is 19.5 mm. Wrest pin sockets open upward from 5.5 mm. to 6.5 mm. The central string orifices lie well within the area of the pegbox, commencing on its anterior surface about 6.5 mm. above the nut and continuing through the pegbox, each at an angle of about 60° to the upper surface of the member, which in turn has an 11° backward slope from its lower edge (Plate 61, right). Bourdon orifices are bored at 70° angles.

2. Fingerboard: Like its prototype, this instrument has a fingerboard with a concave, notched lower posterior surface.
3. Wrest pins: The brass wrest pins were nicely turned out and featured circular grooves within which the strings could be wound after being threaded through holes bored through the shafts.
4. Tailpiece, retainer, saddle and end-pin: The tailpiece is very simply made. The only ornamentation is an incised trim strip which completely encircles the member's anterior surface. There is nothing unusual about either the gut retainer or the bone saddle. The end-pin may have a light coat of flat sealant. There seems to be a thickening of the cavity wall where pin is inserted.

5. Bridge: All edges of the standard bridge are evenly beveled.
6. Strings: Only the third and fifth strings are made of gut; the others are thin, nylon substitutes.

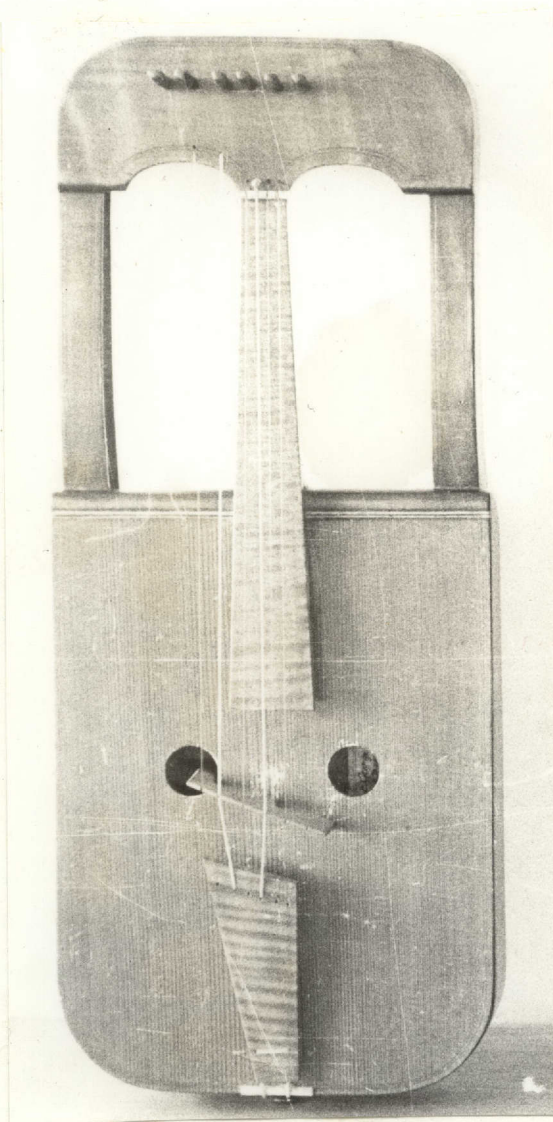


Plate 61--St. Fagan's Saint-George; full frontal

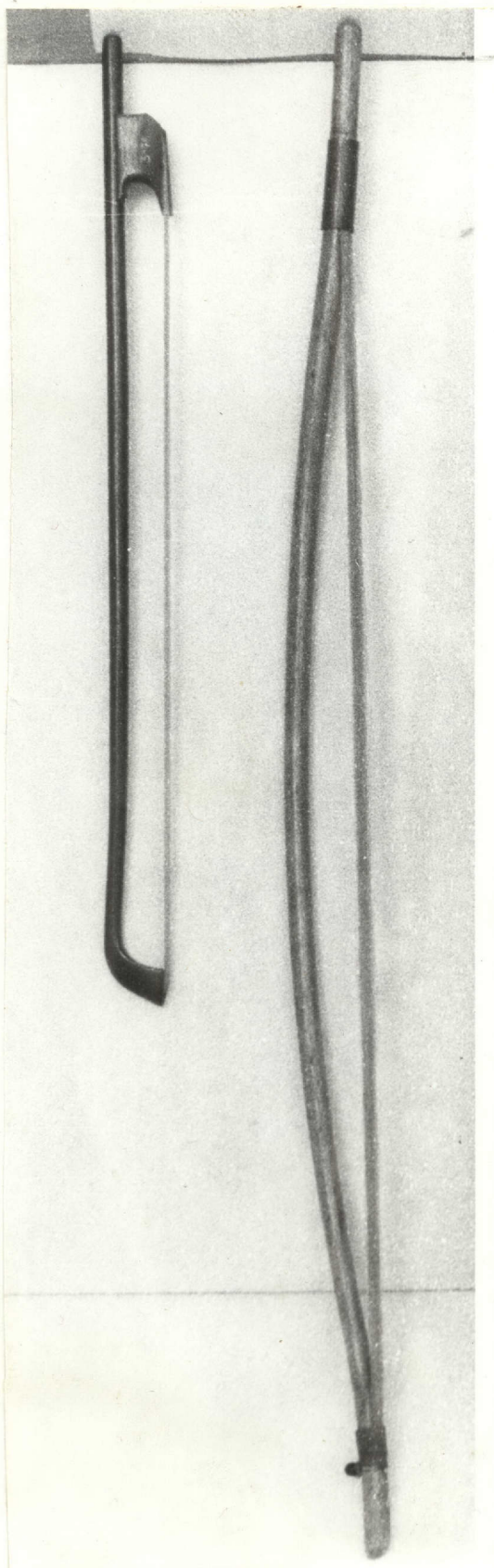


Plate 62--Saint-George bow (above), shown with earlier type of bow; Welsh Folk Museum.

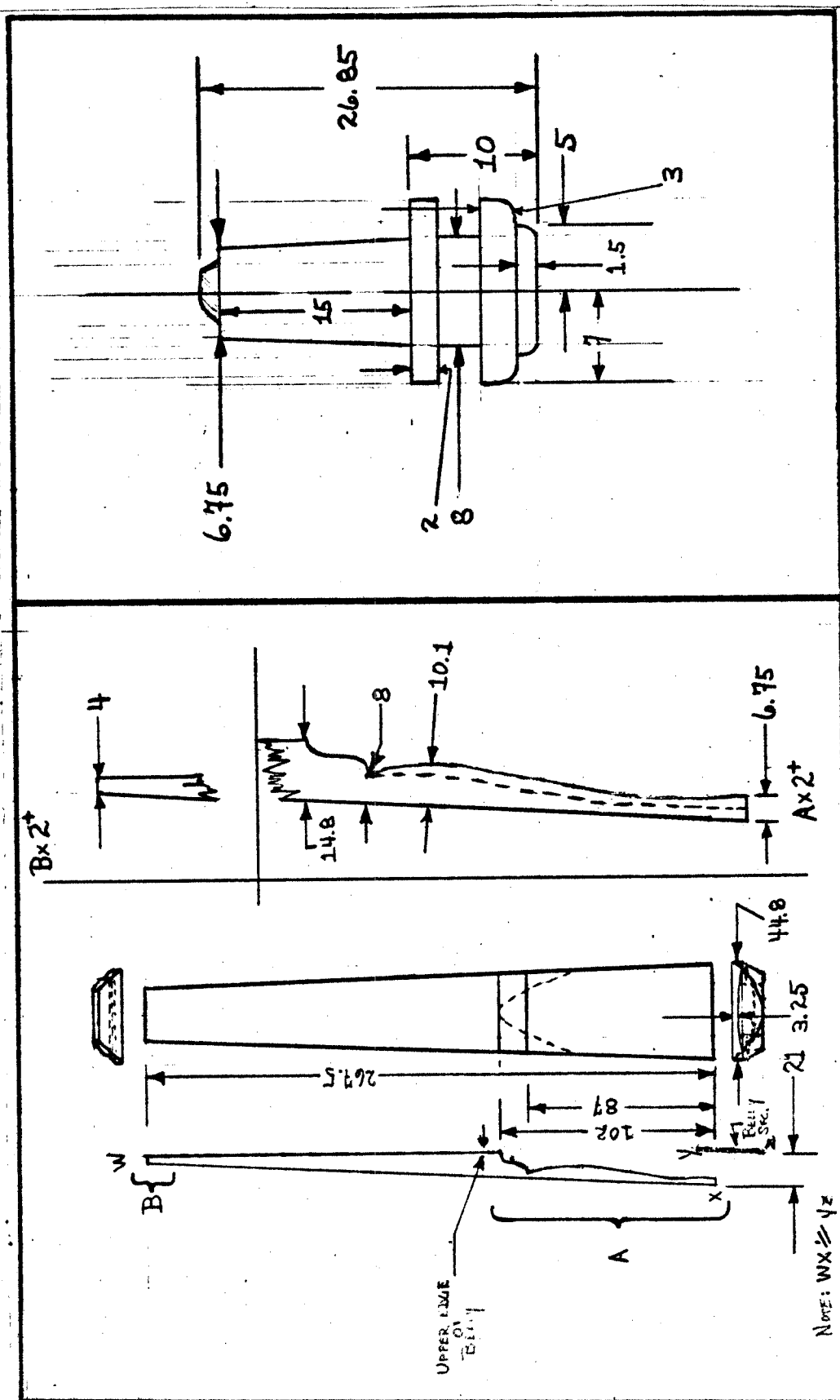


Fig. 26--Fingerboard, full frontal and right lateral with detail (left) and end-pin, lateral: St. Fagan's Saint-George.

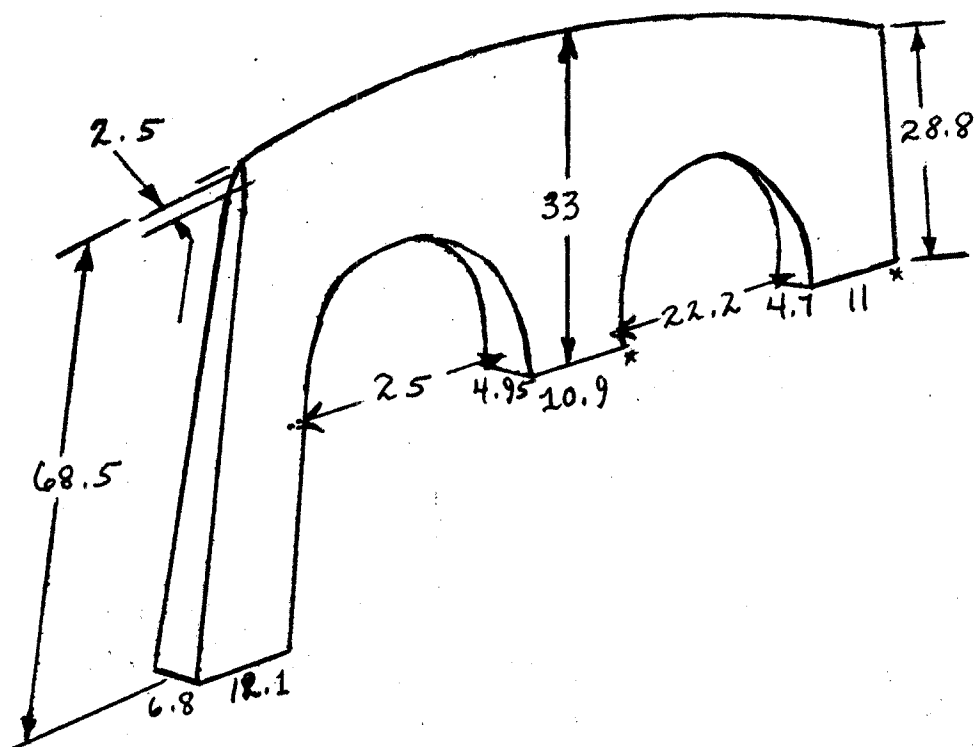


Fig. 27--Bridge: St. Fagan's Saint-George

Replica III

Location.--Welsh Folk Museum (new unit); St. Fagan's, Glamorganshire.

Catalog number.--21.299.1 (G).

Overall condition.--This instrument is not, as Morris claims,¹⁵ an "exact" copy of the Warrington crwth because its measurements differ from those of its prototype. It also differs from the Warrington instrument with regard to ornamentation and finish, and it is complete with all parts except strings. Although the instrument is incorrectly made in certain respects, it could easily be made to play. Judging from its one remaining string, the instrument has a full, rich tone.

Materials and finish.--The body is made of sycamore, and the belly is made of pine. The fingerboard and tailpiece appear to be made of sycamore also. They are stained a deep, reddish brown and are thinly coated with low gloss sealant. The body and belly are not stained, but they are sealed with gloss varnish. The bridge is made of unfinished cherry, and the saddle and end-pin are made of an unknown hardwood.

¹⁵Meredith Morris, op. cit., p. 150.

History.--A label inside the instrument reads:

Gwnaethpwyd fi gan
John Phillips o'r Ynysybwl
yn y fl. 1920;
yn ol dyfaliad y parchedig¹⁶
William Meredith Morris
offeriad cwm Clydach.
O'r masarn fo geir miwsig.¹⁷

Discussing the facts pertaining to the instrument's manufacture, Morris relates that

In 1920, Mr. John Phillips, the amateur violin maker . . . made an exact copy for me of the Warrington crwth. This copy is constructed of sycamore and pine and is beautifully finished and varnished.¹⁸

Structural details.--With regard to technical aspects of the instrument's construction, attention is directed to Plates 63-64 and Figures 28-29. These illustrations follow the descriptions below.

1. Neck and pegbox: The neck of this instrument is made of two horizontally laminated pieces, the lower of which is an integral part of the body. This built up neck gives the fingerboard a great degree of rise above the belly. The pegbox is level with the upper

¹⁶ ? parchedig

¹⁷ Made by / John Phillips of Ybwl Island / in the year 1920; / according to the conjecture (?) of the [R]everend / William Meredith Morris / pastor of the vale of Clydach. / From the sycamore (or maple) comes music.

¹⁸ Meredith Morris, op. cit., p. 150.

surface of the yoke, and it is about 14 mm. thick. Its lower posterior edge is not beveled. Wrist pin sockets are each 4.2 mm. in diameter on the underside, opening to 6.1 mm. The lower portion of the instrument's pegbox is shaped somewhat differently from that of the prototype, and the left and right crown embellishments of the replica are pointed while those of the latter are rounded off.

2. Fingerboard: The convex fingerboard and the nut form a single unit. The design of the fingerboard suggests that it may have originally been made for a violin.
3. Wrist pins: The brass wrist pins are of uniform size and are very precisely made. There are not any flanges, and the lower ends are drilled through.
4. Tailpiece, retainer, saddle and end-pin: The tailpiece exhibits signs of superior craftsmanship. Refinements include slotted string holes to expedite stringing and a raised lip above these holes to eliminate sharp, right angle pull against the lower ends of the strings. The retainer is made of gut. The saddle and end-pin also appear to have perhaps been part of a violin.
5. The bridge of this instrument is most unusual. Phillips may have modified a 'cello bridge to serve the necessary purpose.

6. Strings: The instrument was originally strung with gut strings, but only the second string now remains in place.

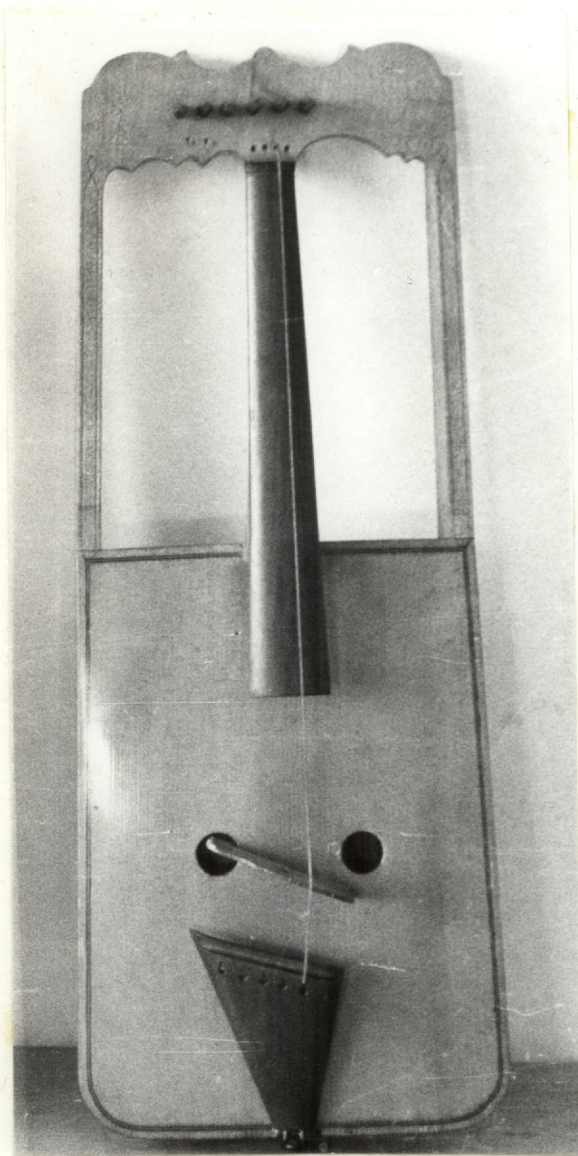


Plate 63--Morris crwth; full frontal

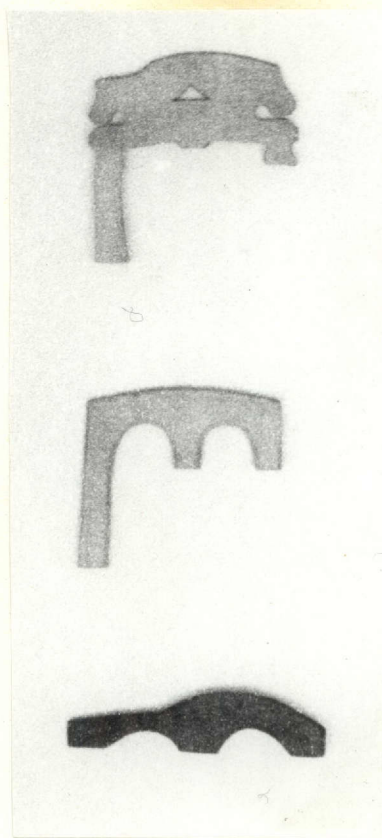


Plate 64--Morris (top), Saint-George (center) and Gurney bridges compared.

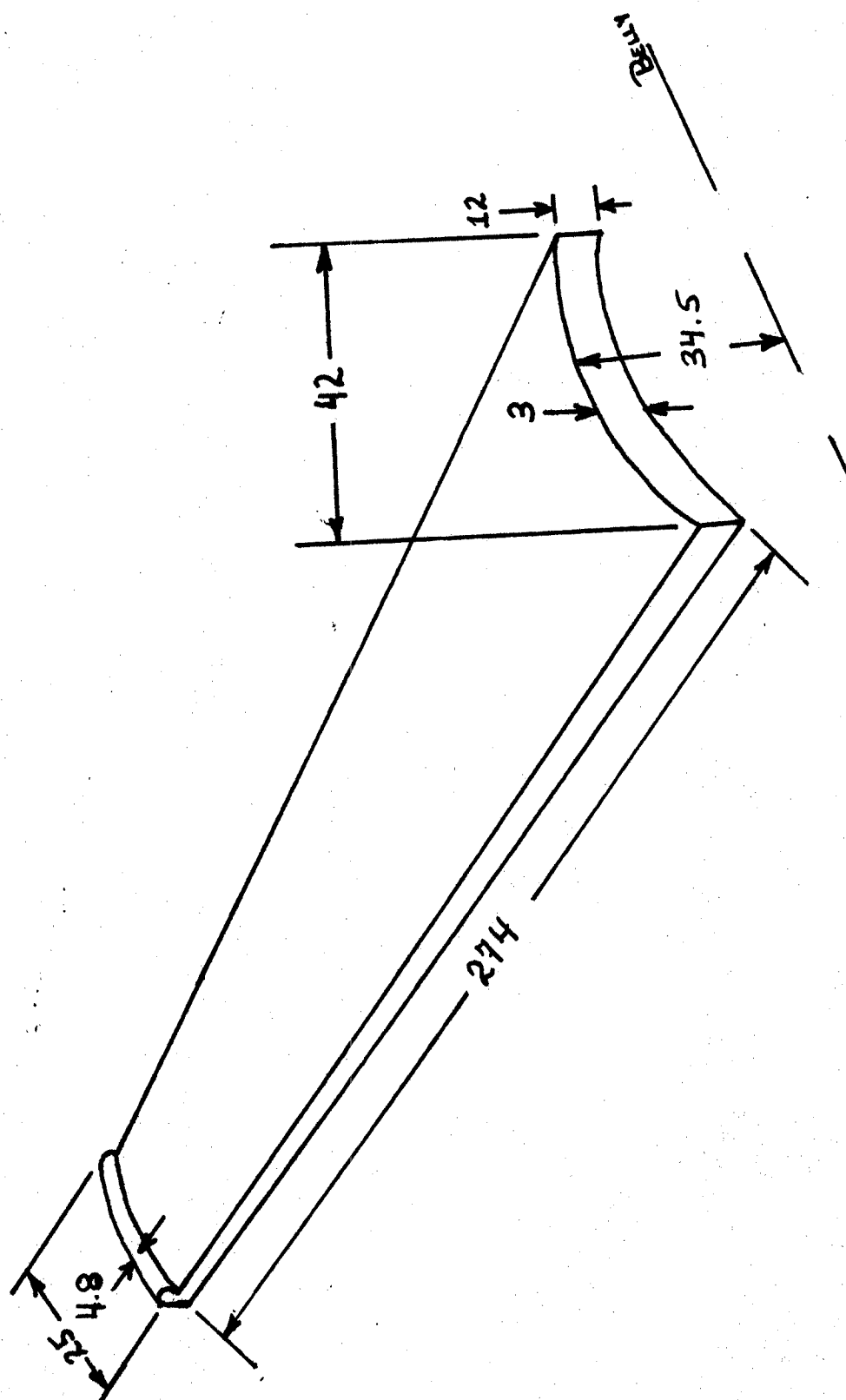


Fig. 29--Fingerboard: Morris

Replica IV

Location.--Department of Prints and Maps, National Library of Wales; Aberystwyth, Cardiganshire.

Overall condition.--This is the only other known, extant instrument constructed by G. Saint-George, and it is virtually identical to Replica II. Like its twin, this crwth is in excellent condition. Complementary accessories include a tuning key and bow, each of which is also identical to its counterpart in the Welsh Folk Museum.

Materials and finish.--The tailpiece, fingerboard and body are made of birch, and the belly is made of hard, fine-grained pine. The nut is made of bone as is the saddle; and like the other Saint-George instrument, this one is ornamented with a bone trim strip which is inlaid horizontally across the top of the belly. The end-pin is of ivory, and the bridge is made of unfinished cherry. This instrument is also stained green and varnished.

History.--The library was unable to produce any record of who the donor was or even exactly when the instrument was acquired. The only information available was that the instrument is said to be a copy of the one in the Victoria and Albert Museum and that it is thought to have been

acquired in the early years of the twentieth century. This, together with the instrument's size and appearance, indicates that it was almost certainly made by Saint-George at either the same or about the same time that the one with the label in it was made (1912).

Structural details.--With regard to technical aspects of the instrument's construction, attention is directed to Plate 65 and Figures 30-32. These illustrations follow the descriptions below.

1. Neck and pegbox: Unlike that of any other instrument examined, the neck of this crwth is basically rectangular rather than rounded in back. The pegbox is 17 mm. thick, and its lower edge is beveled. Wrist pin sockets open upward, each from 5 mm. to 6 mm.
2. Small parts: Except for the above-cited differences in materials used and a few slight differences in measurements, the small parts of the two Saint-George instruments are practically identical. The end-pin of the Aberystwyth instrument was stuck too tightly to extract and therefore could not be examined closely.
3. Strings: Four strings are still intact, but they are too brittle to tighten.

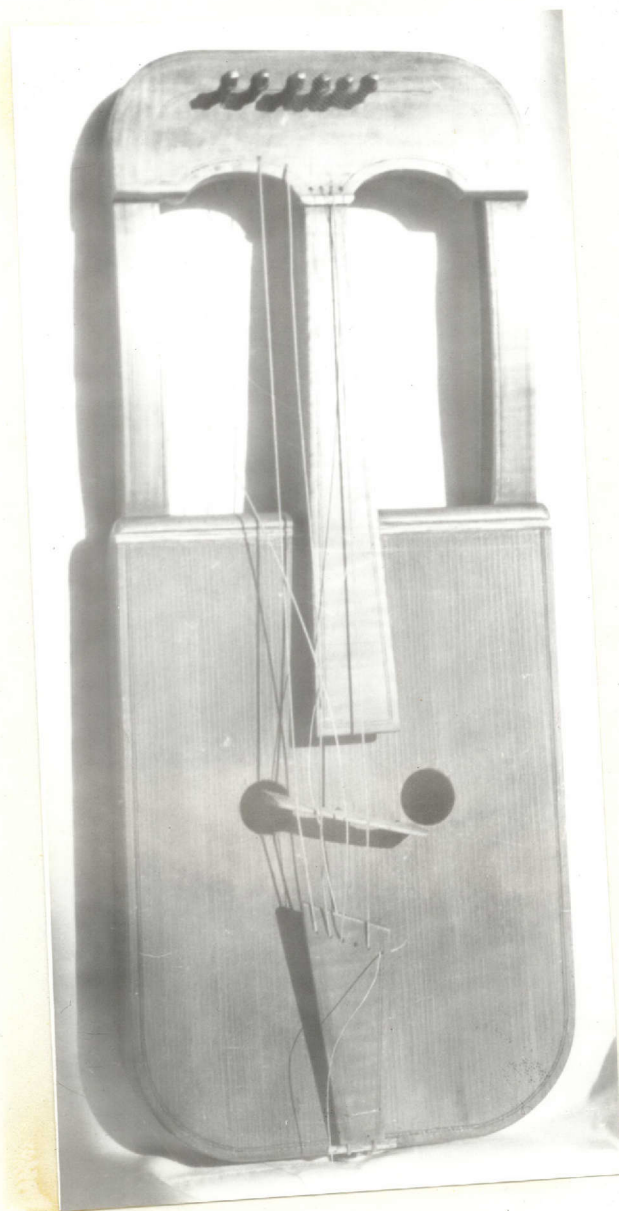


Plate 65--Aberystwyth Saint-George; full frontal

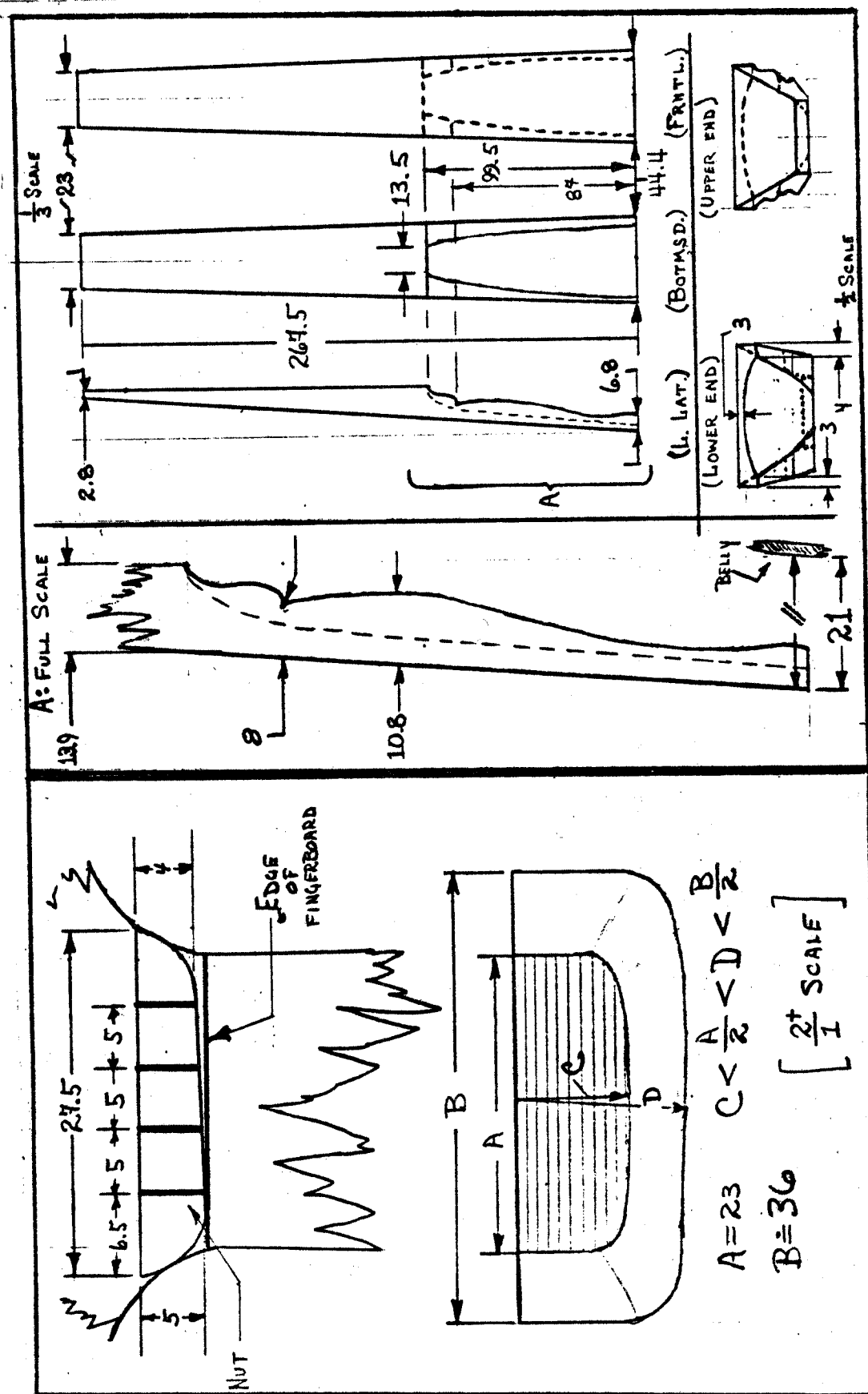


Fig. 30--Neck, full section with flare (lower right); neck/nut, full frontal (upper right) and fingerboard, as indicated: Aberystwyth Saint-George.

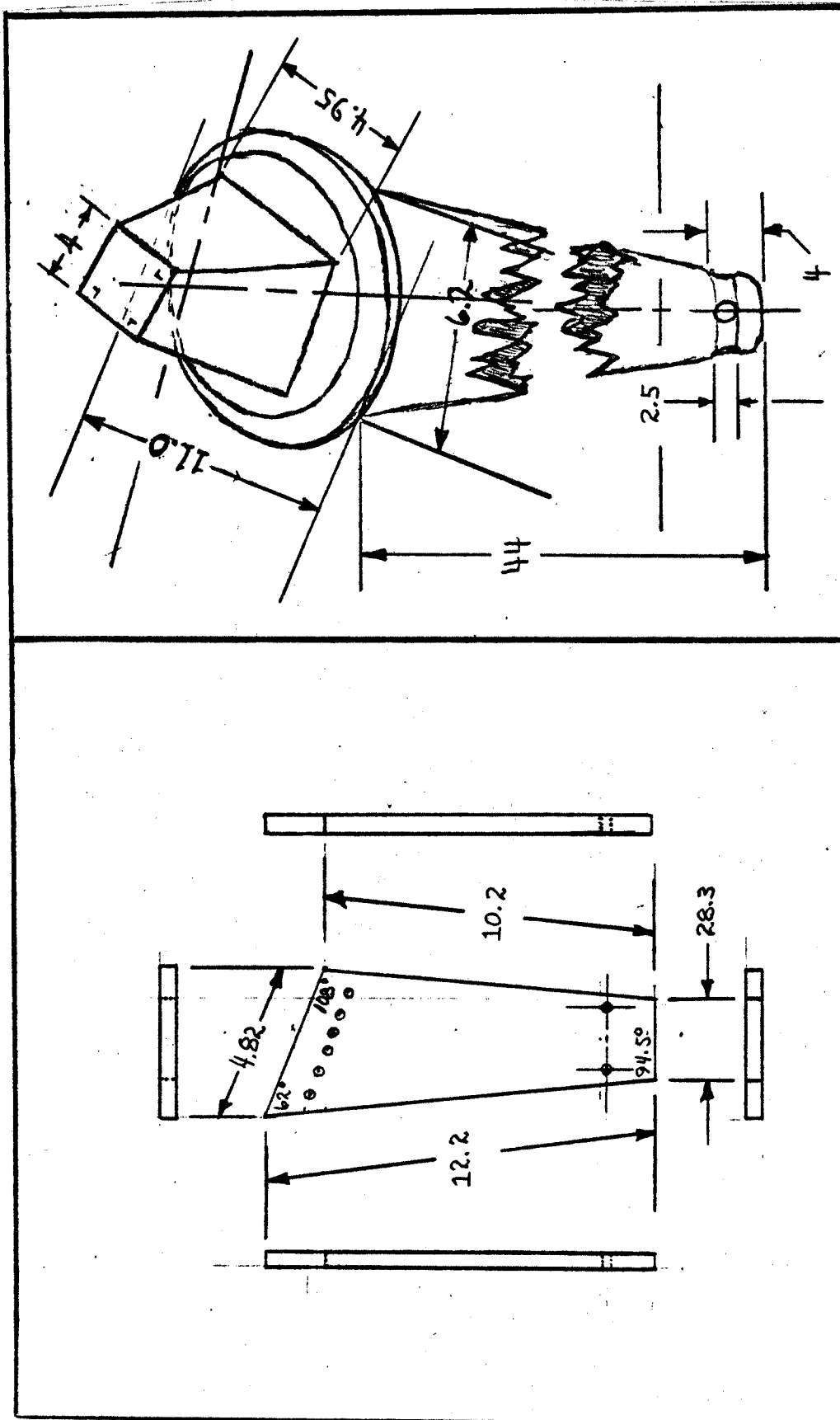


Fig. 31--Tailpiece; full frontal, right and left lateral, and ends (left); and wrest pin, diffiaxial: Aberystwyth Saint-George.

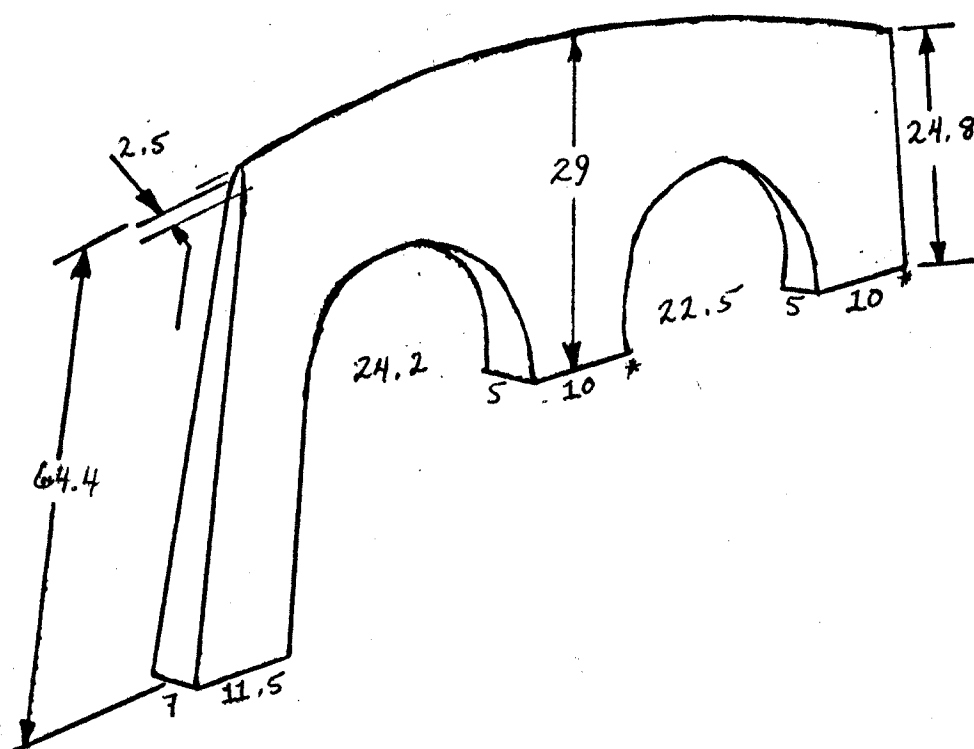


Fig. 32--Bridge: Aberystwyth Saint-George

The Galpin Crwth

Location.--Leslie Lindsey Mason Collection, Museum of Fine Arts; Boston, Massachusetts.

Catalog number.--291, M.F.A. 17.1708.

General comments and history.--This instrument, which is still in reasonably good condition, is neither of pre-1850 vintage nor a replica of such an instrument, but it deserves brief mention since it was made by a person whose early life coincided with the last days of the crwth.

The instrument was made for Canon Francis W. Galpin by Owain Tudwr of Dolgellau, Merionethshire (1895). With its unique, recessed pegbox and its carefully made bridge, the instrument shows signs of excellent craftsmanship but not absolute stylistic accuracy. The crwth was among the numerous items in the Galpin collection which were purchased by William Lindsey of Boston in 1916 and given to the museum by Lindsey in the following year. The collection is named after Lindsey's daughter, who was lost in the sinking of the R.M.S. Lusitania.¹⁹

¹⁹Nicholas Bessaraboff Bodley, Ancient European Musical Instruments (Cambridge, Massachusetts, 1941), p. xxv.

Bodley describes the instrument as follows:

Flat, shallow body with the yoke supporting the neck. Sound-box, yoke, peg-board, and neck carved out of one solid piece of maple. Sound-board of spruce with two circular sound-holes. Finger-board of maple, stained dark brown. Tailpiece . . . hooked by a copper wire to the tail-pin. . . . gut strings. . . . tuning pegs of steel. . . . two cross-bars glued to the belly fitting into the notches cut in the sound-box walls. Dark, greenish-brown varnish. Ink label reading:

'Owain Tudwr. Dolgellau
in gweneuthurwr. y
Crwth hwn.²⁰

The photograph and diagram which follow (Plates 66 and 67, respectively), also from the Bodley catalog, are sufficient for the purposes of this document.

²⁰Ibid., p. 314.

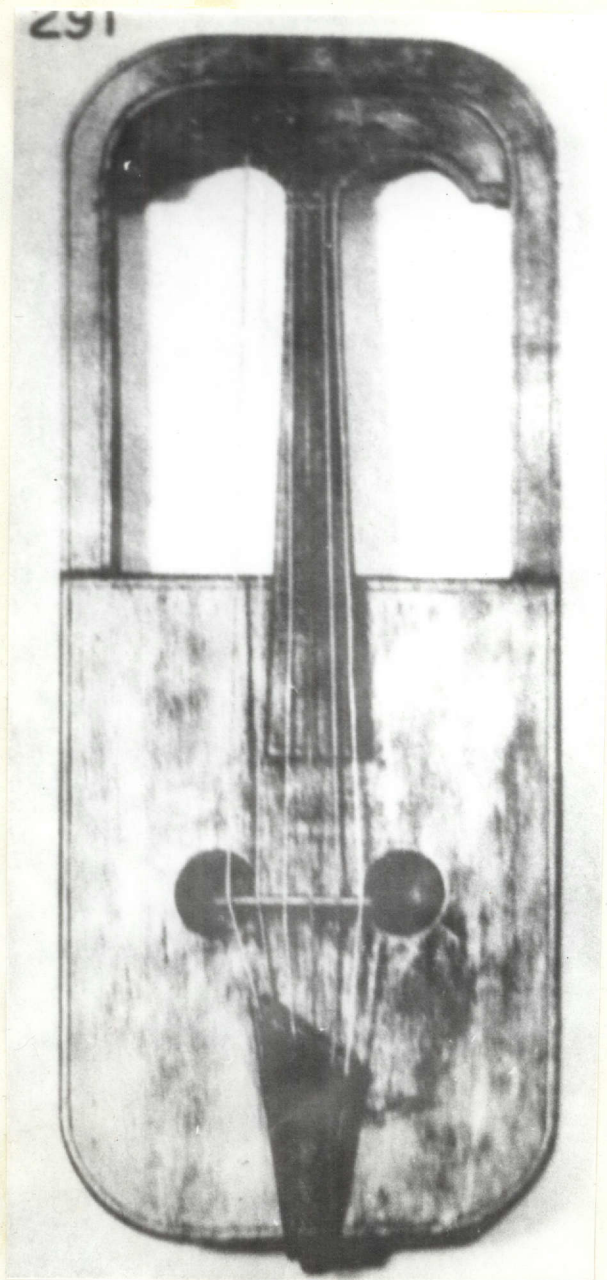


Plate 66--Galpin, full frontal²¹

²¹Ibid., Plate X-291.

Other Instruments

Additional Chanot Replicas

It is no longer certain exactly how many replicas Georges Chanot made of the Wynne Finch instrument, but he seems to have made at least three. In addition to the instruments in London and Brussels, there is one in Copenhagen. Of these three instruments, only the one in London was available for inspection, but since, according to Carl Engel, the Chanot instruments are identical to the point of being virtually indistinguishable, the data on the London instrument is adequate.²²

Crwth Owned by Nansi Richards

There is among the possessions of the prominent Welsh harpist, Nansi Richards, an interesting instrument of fairly recent vintage. This crwth, which was made by a friend of the owner, is constructed in a most unusual way. The body is made of interlocking sides, crosspieces and neck. The back and belly are also separate; so are all other parts. A playable instrument could be built according to such a design, but this instrument is not playable due to the very poor craftsmanship which went into its manufacture. The wood

²²Engel's statement is quoted in Meredith Morris, "The Crwth," p. 163. Actually, this report is not fully correct; the Brussels instrument does not have a trim strip.

of the body and belly is too thick, and the fingerboard is not only convex but also crookedly positioned. The bridge is much too convex, extremely thick, crudely hand-carved, and extremely cumbersome. Some of the wrest pins do not fit snugly into their sockets, and the remaining strings are too thick.

Two Instruments Reported by Morris

A second Tudwr crwth.--Owain Tudwr of Dolgellau made a second crwth in 1898. According to Tudwr, this instrument, made to order for a "Mr. Calthorp, of unknown address," was superior to the one made for Canon Galpin.²³ The present whereabouts of this crwth are unknown.

An instrument discovered by Morris.--A short time before he prepared his monograph, Morris discovered a crwth in the possession of a person whose name he intentionally failed to cite. An account of the discovery follows.

I discovered recently a crwth at _____ farmhouse at _____. This is the most perfect and the most artistically made specimen of all that now exist. The owner is an intelligent collector of all kinds of Welsh bygones . . . and is most anxious to conceal any knowledge of them from curio hunters and persistent antiquaries. I offered him twenty pounds for the crwth and eventually twenty-five, then thirty, but he would not part with it. He hugged and fondled it as a miser would a purse of gold. He would not allow me to make a sketch of it. I do not believe that he would have allowed me to admire it if he could have prevented it.

²³ Meredith Morris, op. cit., p. 149.

He strictly charged me not to divulge the secret of its existence or whereabouts, but I assured him he need have no uneasiness on that score, and that for a good reason: I hope one day to become . . . the happy owner of part of his treasures at least, to wit, the crwth.

The outline and dimensions of this unique specimen are about the same, as those of the Warrington or the Aberystwyth crwth, but in workmanship is [sic] much superior, and the head of the instrument is far more artistic. The upper edge of the frame has inlaid work of various coloured woods. . . . The pieces inlaid appear to be mahogany or some other reddish wood, box, and a green coloured wood. . . . The instrument is varnished light golden brown. This specimen appears almost certainly to belong to about the middle of the eighteenth century. It must be saved at all costs from ultimate destruction -- or America!²⁴

There is reason to believe that this instrument still exists. The author learned from Nansi Richards of an instrument which shows evidence of not just good craftsmanship but truly outstanding artistry. In a telephone conversation with the instrument's owner, the author was told very rudely that there was no such item about the household in question. Miss Richards, who has seen the instrument in the home of its owner, relates that it is ornamented in some unusual way which she cannot exactly recall. Alun Davies further reports that several persons have tried to see the crwth, but that as far as he knows, only one person from outside the family, a close and trusted friend, has been successful.

²⁴Ibid., p. 161.

The Question of the Crwth's Presence
in North America

It is possible that crwths were brought to America by Welsh settlers, who began coming to the colonies in the seventeenth century and came in large numbers after the opening of the Pennsylvania coal fields in ca. 1760. Although no crwths have to date been found on the American continent, the influence of crwth music upon much of the fiddle music of rural America is very evident. The convex bows, nearly flat bridges, flat fingerboards, and scordatura tunings of some "country fiddles" are also interesting. No less curious is the way in which so many fiddle tunes lend themselves to being played on a crwth (Recorded Examples 13- a, b, c).

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