



Classification of Musical Instruments: Translated from the Original German by
Anthony Baines and Klaus P. Wachsmann

Author(s): Erich M. von Hornbostel and Curt Sachs

Source: *The Galpin Society Journal*, Mar., 1961, Vol. 14 (Mar., 1961), pp. 3-29

Published by: Galpin Society

Stable URL: <https://www.jstor.org/stable/842168>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



Galpin Society is collaborating with JSTOR to digitize, preserve and extend access to *The Galpin Society Journal*

JSTOR

Classification of Musical Instruments

TRANSLATED FROM THE ORIGINAL GERMAN*
BY ANTHONY BAINES AND KLAUS P. WACHSMANN

TRANSLATORS' PREFACE

The revival of a learned treatise about half a century after its first appearance is an unusual event, and there must be cogent reasons for taking such a step. In the present case the reasons are not hard to state. No other system of classification is more frequently quoted, nor has any later system been able to supplant it. On these grounds alone it would be difficult to write it off as being out-of-date.

Apart from the arguments of the system itself, the biting comments on curators and collectors, and on the waywardness of their cataloguing, are as relevant today as they were fifty years ago. Reed instruments are still apt to be labelled as trumpets if the bell is flared—there is a dismal case of this in one of our great museums at present—and the terminology is still at times as muddled as it was in the many instances of which Hornbostel and Sachs complained; while as for anthropologists, their publications do not invariably give proof that all have read their *Zeitschrift für Ethnologie*.

It is true that criticisms have been made, and modifications demanded here and there; even the authors did not subsequently feel themselves rigidly bound to what they had first stated in 1914, when they also tried to anticipate those points over which need for revision was most likely to arise. A good account of these criticisms has been given in Jaap Kunst's *Ethnomusicology* (3rd edn., The Hague, 1959). None of the critics, however, could persuade the present translators that a return to the original text might involve the undesirable resurrection of some best-forgotten error. On the contrary, the discussions of the system's merits or demerits have convinced them that it is necessary for students to have easy access to the source itself. This is not meant to imply that the Hornbostel-Sachs tables are in all circumstances easily applied; one need but think of some of the many varieties of stamping tubes, e.g. of the slender 'stamping tubes' of the Shambala of East Africa, who 'make slits [in the tubes] and wave them backwards and forwards while dancing, so that the tongues are caused to vibrate by atmospheric pressure' (Hornbostel, 1933, p. 296), or

* Erich M. von Hornbostel und Curt Sachs, 'Systematik der Musikinstrumente. Ein Versuch', *Zeitschrift für Ethnologie*, Jahrg. 1914. Heft 4 u. 5. (Berlin, 1914.) The translators are grateful to Professor Georg Eckert, Editor of the *Zeitschrift*, for his assent to the work's republication.

of the bamboo tubes which they strike against the ground or drum upon with twigs; or of the stamping tubes of their next-door neighbours, the Pare, who cover the end of the tube that hits the ground with a membrane. Are these cases of *Kontamination* (see below, paragraph 14) of a basic type 'stamping tube', or is the first a type of free aerophone (41 in the tables), the second a plosive aerophone (413), the third a percussion idiophone (111.2), and the fourth a membranophone (21) of sorts?

The original text did not reach a large musical public since it appeared in the comparative obscurity of an ethnological journal, while also, being written in German, it did not become as widely known in the English-speaking world as it might have done otherwise. Thus there is a clear case for now offering an English translation. To do so at this moment will serve also as a fitting memorial to Professor Curt Sachs, who died in 1959. Posterity can pay no higher tribute to a scholar than to return to his and his collaborator's work and put it into the hands of a wider public than knew it before. It is in this spirit that the English translation is published.

The text paragraphs were not numbered in the original. Words in *square* brackets are the authors' if German, and the translators' if otherwise. The translators' terminology in the tables takes due account of English terms used by the authors in their various later publications—as Hornbostel in 'The Ethnology of African Sound-Instruments', *Africa*, vol. VI (London, 1933), glossary, pp. 303–11; and Sachs in *The History of Musical Instruments* (New York, 1940), 'Terminology', pp. 454–67. Many of their English terms have come into wide use, and have been kept save in a few cases where a change (even in one case to French) seemed to the translators unavoidable or greatly preferable. Most of the more obscure instruments cited in the tables are described by Sachs in his *Real-Lexikon* (Berlin, 1913). Footnotes are original unless stated.

Classification of Musical Instruments

TREATISES on systems of classification are by and large of uncertain value. The material to be classified, whatever it may be, came into existence without any such system, and grows and changes without reference to any conceptual scheme. The objects to be classified are alive and dynamic, indifferent to sharp demarcation and set form, while systems are static and depend upon sharply-drawn demarcations and categories.

2. These considerations bring special difficulties to the classifier, though also an attractive challenge: his aim must be to develop and refine his concepts so that they better and better fit the reality of his material, sharpen his perception, and enable him to place a specific case in the scheme quickly and securely.

3. A systematic arrangement for musical instruments concerns firsts of all musicologists, ethnologists, and curators of ethnological collec-

tions and those of cultural history. Systematic arrangement and terminology are urgently needed, however, not only for collections of material, but also for their study and in its interpretation. He who refers to a musical instrument by any name or description he pleases, being unaware of the points which matter, will cause more confusion than if he had left it altogether unnoticed. In common speech technical terms are greatly muddled, as when the same instrument may be indiscriminately called a lute, guitar, mandoline, or banjo. Nicknames and popular etymology also mislead the uninitiated: the German *Maultrommel* is not a drum, nor the English *Jew's* (properly *jaw's*) harp a harp, nor the Swedish *mungiga* a *Geige* [fiddle], nor the Flemish *tromp* a trumpet; only the Russians are correct when they call this same instrument, a plucked lamella, by the uncommitted term *vargan* (from Greek ὄργανον, 'instrument'). Homonyms are no less dangerous than synonyms: the word *marimba*, for instance, denotes in the Congo the set of lamellae usually called *sansa*, but elsewhere it denotes a xylophone. Ethnological literature teams with ambiguous or misleading terms for instruments, and in museums, where the field-collector's report has the last say, the most senseless terms may be perpetuated on the labels. Correct description and nomenclature depend upon knowledge of the most essential criteria for the various types,—a condition which, as a visit to a museum will show, is hardly ever met. One will find, for instance, that oboes, even when still in the possession of the double reed which unmistakably proclaims them for what they are, are noted as flutes, or at best as clarinets; and should the oboe have a brass bell one may be certain of the label 'trumpet'

4. A system of classification has theoretical advantages as well as practical uses. Objects which otherwise appear to be quite unrelated to each other may now become associated, revealing new genetic and cultural links. Herein will always be found the leading test of the validity of the criteria upon which the system is based.

5. The difficulties which an acceptable system of classification must surmount are very great, since that which suits one era or nation may be unsuitable as a foundation for the instrumental armoury of all nations and all times. Thus the Ancient Chinese based their classification on material, distinguishing between instruments made of stone, metal, wood, gourd, bamboo, hide and silk; consequently, to them, trumpets and gongs, stone harmonicas and marble flutes, shawms and clappers, each belonged together.

6. Our own present-day practice does not amount to much more. Sound-instruments are divided into three major categories: stringed instruments, wind instruments, and percussion instruments. This

cannot be defended even on the grounds that it satisfies day-to-day requirements. A large number of instruments cannot be fitted into any of the three groups without placing them in an unnatural position, like the celesta, which, as a percussion instrument, is brought into close proximity to drums and so on. As a remedy one introduces a fourth group under the disconcerting heading 'miscellaneous'—in any systematic grouping an admission of defeat. Moreover, the current classification is not only inadequate, but also illogical. The first requirement of a classificatory system is surely that the principle of demarcation remains the same throughout for the main categories. Our customary divisions, however, follow two different principles, stringed instruments being distinguished by the nature of the vibrating substance but wind and percussion by the mode of sound-excitation—ignoring the fact that there are stringed instruments which are blown, like the Aeolian harp, or struck, like the pianoforte. The customary subdivisions are no better. Wind instruments are divided into woodwind and brass, thus giving a subordinate criterion of differentiation, namely, material, an unjustifiable predominance and flagrantly disregarding the fact that many 'brass' instruments are or were once made of wood, like cornetts, serpents and bass horns, and that in any case many 'woodwind instruments' are optionally or invariably made of metal, as flutes, clarinets, saxophones, sarrusophones, tritonicons, etc.

7. The objections which can be raised against the crudity of the customary divisions are now familiar to organology [*Instrumentenkunde*], and in recent decades scholars have made more than one attempt to attain something more satisfactory. Leaving aside classifications which have owed their structure to the peculiarities of this or that collection, catalogues have latterly in general adopted a system which Victor Mahillon has used since 1888 for his comprehensive catalogue of the Museum of the Brussels Conservatoire.

8. Mahillon takes the nature of the vibrating body as his first principle of division, and thus distinguishes between instruments [1] whose material is sufficiently rigid and at the same time sufficiently elastic to undergo periodic vibration, and named by him 'self-sounding instruments' (*instruments autophones**) ; [2] in which sound-waves are excited through the agency of tightly-stretched membranes; [3] in which strings vibrate; and lastly [4] in which a column of air vibrates. Thus he distinguishes four categories: self-sounders, membrane instruments, stringed, and wind instruments. Besides the uniformity of its principle

* For reasons which Sachs has explained in his *Reallexikon der Musikinstrumente* (Berlin, 1913, p. 195a), we prefer the term *idiophones*.

of division, the system has the great advantage in that it is capable of absorbing almost the whole range of ancient and modern, European and extra-European instruments.

9. Mahillon's system of four classes deserves the highest praise; not only does it meet the demands of logic, but also it provides those who use it with a tool which is simple and proof against subjective preferences. Moreover, it is not so far removed from previously-used divisions as to offend well-established custom.

10. It has seemed to us, however, that the four-class system stands in pressing need of development in fresh directions. Mahillon started on the basis of the instruments of the modern orchestra, with which, as an instrument manufacturer and musician, he was in closest contact, and it was these which gave him the initial challenge to work out his system. Then, as the collections of the Brussels museum grew under his direction, he explored over years of relentless effort the limitless field of European and exotic organology. Inevitably a newly-acquired specimen would now and then fail to fit into the system, while certain subdivisions which figure importantly among European instruments—e.g. those of keyboard and mechanical instruments—assumed an unwarrantably prominent place. Mahillon had indeed been led for the sake of the European instruments, to juxtapose categories which did not logically build a uniform concept. Thus he divided the wind instruments into four branches, (1) reed instruments [*instruments à anche*], (2) mouth-hole [*instruments à bouche*], (3) polyphone instruments with air reservoir, and (4) cup-mouthpiece instruments [*instruments à embouchure*]. Consider too the drums, which he grouped as frame drums, vessel drums, and double-skin drums; he consequently divided the skin drums corresponding to our side- and kettle drums—and likewise the autophones—into instruments of untuned pitch (*instruments bruyants*) and those of tuned pitch (*à intonation déterminées*). This is an awkward distinction, since a wide range of transitional sounds occurs between pure noises and noise-free tones; indeed, save for a few laboratory instruments, there are no sound-producers that can truly be said to yield either pure noise or pure tones, the sounds of all the usual musical instruments being more or less wrapped in noise. Mahillon later seems to have sensed this when he contrasted noise-instruments with those *à intonation nettement* or *intentionnellement déterminée*; but the criterion is subjective and as a rule incapable of proof.

11. In general, Mahillon was right to subdivide the four main classes into 'branches' differentiated by playing action. Yet for stringed instruments it was a dubious procedure; a violin remains a violin whether

one bows it with a bow, plays it pizzicato with the fingers, or strikes it *col legno*. Perhaps this seems a lopsided argument, since the violin is, after all, designed to be bowed. But there are other instances. One could cite instruments whose playing action has changed in the course of time but whose form has remained unaltered. This was the case, for example, with the ancient Celtic crowd, which can be proved to have been plucked in the earliest times, but which came to be bowed in the High Middle Ages: should the history of instruments therefore deal with it half in a chapter on plucked stringed instruments and half in one on bowed, although the instrument itself remains just the same? Then there is the psaltery, which is turned into a dulcimer [*Hackbrett*] when the player uses beaters; should one, in a collection, separate the psalteries, otherwise indistinguishable from each other, into two groups on the grounds that in one country of origin it was customary to pluck it but in another to beat it? Should I place the clavichord and the pianoforte side by side but house the harpsichord with the guitars because its strings are plucked?

12. All these considerations have persuaded us to undertake afresh the attempt to classify musical instruments. We were fortunate in having at our disposal as a ready-made base the large and extensively described collections of the Brussels museum out of which Mahillon's system had grown. At the same time we are aware that with increasing knowledge, especially of extra-European forms, new difficulties in the way of a consistent classification will constantly arise. It would thus seem impossible to plan a system today which would not require future development and amendment.

13. Like Mahillon, we accept the physical characteristics of sound-production as the most important principle of division; but even at this point considerable difficulties are met since acoustic physics has so far covered but the smallest fraction of the preliminary investigations. Thus inadequate research has yet been undertaken on the sound-production of the bull-roarer, the vibratory manner in north-west American 'ribbon-reeds', the vibration events in bells, gongs, kettle-drums, plucked drums, and wind instruments with free reeds and fingerholes. To such difficulties must be added others arising from the morphology of instruments. The problem of defining the term 'frame drum' (*tamburin*) for example, is scarcely capable of satisfactory solution; undoubtedly the typical frame drum represents a concise concept not to be disregarded in any classificatory system, but the transition between this and the pronouncedly tubular drum occurs without a break, often making it impossible to decide on the basis of shape whether a specimen belongs to the one kind or to the other.

14. Other obstacles in the path of the classifier are instruments showing adulterations between types [*Kontaminationen*]. The fact of adulteration should be accounted for by placing such instruments in two (or more) groups. In museums and catalogues these cases will be arranged according to the dominant characteristic, but cross-references to other characteristics should not be omitted. Thus, among instruments of every class one may find rattling devices which belong to the inventory of idiophones—a feature which cannot be taken into account when placing the instrument in the classification. But where the adulteration has led to an enduring morphological entity—as when kettle-drum and musical bow combine in a spike lute—it must have a place of its own within the system.

15. We must refrain from arguing our subdivisions in detail. Whosoever will check these critically, or test them in practice, will doubtless repeat the lines of thought which are not set out here, with minor variations of his own.

16. In classifications it is often customary to indicate the ranking of divisions within the system by means of specific headings, as especially in zoology and botany with expressions like class, order, family, genus, species, variant. In the study of instruments, Mahillon himself felt this need and met it by introducing the terms *classe*, *branche*, *section*, *sous-section*; on Gevaert's advice he refrained from using the term 'family' on account of its widely-known use for instruments of like design but of different sizes and pitches.

17. We consider it inadvisable to maintain consistent headings throughout all rubrics for the following reasons. The number of subdivisions is too big to manage without bringing in a petty superfluity of headings. Moreover, in any system one must leave room for further division to meet special cases, with the result that the number of subdivisions could for ever increase. We have purposely not divided the different main groups according to one uniform principle, but have let the principle of division be dictated by the nature of the group concerned, so that ranks of a given position within a group may not always correspond between one group and another. Thus terms like 'species' may refer in one case to a very general concept but in another to a highly specialized one. We therefore propose that the general typological headings be restricted to the topmost main groups, though one could, like Mahillon, speak of the four main groups as classes, of the next divisions (with a two-unit symbol [*zweiziffri*]) as sub-classes, the next (three-unit) as orders, and the next (four-unit) as sub-orders.*

* Translators' note: It is not clear whether the authors here refer to Mahillon's letter-symbols or to their own numerical coding described further on.

18. We have refrained from providing a subdivision containing no known existing representative, save in cases where a composite type may be assumed to have had a precursor in a simpler type now extinct. Thus it can be assumed from analogy with numerous types that Man rubbed a solid, smooth block of wood with the moist hand before he ever carved a series of differently-pitched tongues by cutting notches into the block, as in the friction block of New Ireland. Again, where the wealth of forms is exceptionally vast, as with rattles, only the more general aspects of their classification can be outlined in the scheme, and these will certainly require further elaboration.

19. In general we have tried to base our subdivisions only on those features which can be identified from the visible form of the instrument, avoiding subjective preferences and leaving the instrument itself unmeddled with. Here one has had to consider the needs not only of museum curators but also of field workers and ethnologists. We have carried the subdivisions as far as seemed important for the observation of cultural history and detail, though the plan of the whole classification makes possible its application to the material either summarily or in great detail as desired; general treatises and smaller collections may not require to follow our classification to its last terms, while specialist monographs and catalogues of large museums may well wish to extend it in further detail.

20. The application of our findings in describing and cataloguing is substantially facilitated by use of the Dewey numerical system.* If those in charge of large collections who issue catalogues in the future decide to accept our numerical arrangement, it will become possible to find out at first glance whether a given type of instrument is represented in the collection.

21. The ingenuity of Dewey's idea lies in the exclusive use of figures, replacing the more usual conglomeration of numbers, letters and double letters by decimal fractions. These are so used that every further subdivision is indicated by adding a new figure to the right-hand end of the row; the zero before the decimal point being always omitted. Thus it becomes possible not only to pursue specification to whatever limits one desires and with never any trouble in the manipulation of the numbers, but also directly to recognize from the position of its last figure the ranking of a given term with the system.

It is also feasible in a row of numbers to divide off any set of figures by points. Say, for example, that it is a bell chime [*Glockenspiel*] which

* Since the numerical arrangement for the *Bibliographie Internationale of Musical Instruments* applies only to European instruments, and is anyhow as inadequate as can be, we have planned our own numerical order independently.

is to be coded and placed in the system. In the context of the system we are dealing with an idiophone, the class to which the initial code-figure 1 is allotted. Since the instrument is struck it belongs to the first subclass, and so another 1 is added (struck idiophones=11). Further addition of relevant code-figures produces the ranking 111 since it is struck directly; and then, as a struck-upon [percussion] idiophone, it earns a fourth figure, in this case 2 (1112=percussion idiophones). Further specification leads to 11124 (percussion vessels), 111242 (bells), 1112422 (sets of bells), 11124222 (sets of hanging bells), and 111242222 (ditto with internal strikers)—obviously, everyone must decide for himself how far to go in a given case. Instead of the unmanageable number now arrived at, we write 111.242.222. The first cluster shows that we are dealing with an idiophone that is struck directly, while the second and third together imply that we are dealing with bells.

22. Common considerations among all instruments of a class—e.g. with membranophones the method of fixing the skin, and with chordophones the playing method—may be noted with the aid of figures appended to the essential code-number by a hyphen: the pianoforte would be entered as 314.122-4-8 and the harpsichord 314.122-6-8, because 8 represents the keyboard, 4 the hammer playing-action, and 6 the plectrum playing-action, both instruments having the same main number indicating board zithers with resonator box.

23. Any of the subordinate criteria of division may, if desired, easily be elevated and treated as a higher rank in the classification, by switching the positions of figures. Thus, for a bagpipe in which chanter and drone are both of the clarinet type, the code-number would read 422.22-62, i.e. a set of clarinets with flexible air reservoir. But if, for instance in a monograph on bagpipes, one wished to especially distinguish these [chanter and drone] features, one could write 422-62:22, i.e. reed instrument with flexible air reservoir whose pipes are exclusively clarinets.

24. Conversely, in order to bring closer together groups which are separated in the system, it is possible to turn a main criterion of division into a subordinate one without destroying the system: one simply replaces the first relevant figure by a point (.) and then adds it after a square bracket] at the end of the number. Thus in the example of bagpipes, it might be important to specify these instruments as always polyorganic* but with components which are sometimes clarinets and sometimes oboes; instead of 422-62:22=reed instrument [*Schalmeien-instrument*], with flexible air reservoir, polyorganic, composed of clarinets, it might be preferable to write 422-62 : . 2=set of reedpipes

* Polyorganic means composed of several single instrumental units.

[*Schalmeienspiel*] with flexible air reservoir=bagpipe, and then to differentiate further by writing 422-62 : . 2]1=bagpipe of oboes, or 422-62 : . 2]2=bagpipe of clarinets.*

25. Other specifications applying to a subordinate group are suffixed to the code-figures of the latter, e.g. 422-62 : . 2]212=a bagpipe of clarinets with cylindrical bore and fingerholes.

26. These innumerable cases in which an instrument is composed of parts which in themselves belong to different groups of the system could be indicated by linking appropriate figures by a plus sign. One then avoids repetition of a number common to both such parts, writing this number once and following it with a point: a modern trombone with slide and valve would then appear not as 423.22+423.23, but as 4232.2+3, and similarly bagpipes composed partly of clarinets and partly of oboes as cited above, would become 422.62 : . 2]1+2.

27. In certain circumstances it may be necessary not only to rearrange the rankings of the concepts and create new subdivisions, but also to incorporate into the higher ranks of the classification some criterion which has purposely not so far been used. There is nothing to prevent this being done, and we should like to illustrate it by a final example, at the same time showing how we envisage the development of our system for special purposes. Let us imagine the case of a monograph on the xylophone. The system divides struck idiophones (III.2) by the shape of the struck bodies, thus: struck sticks (III.21), struck plaques (III.22), struck tubes (III.23), and struck vessels (III.24). Xylophones could fall into any of the first three, but the shape of the sounding bodies is here of little relevance—the transition from sticks to plaques being quite fluid—and so the fifth figure may be removed, and, if desired, added as]2 at the end. For the sixth figure we insert 2, if the description is to concern only multi-tone instruments, giving III2. .2=sets of struck idiophones [*Aufschlagspiele*]. We must, however, exclude sounding bodies of metal, stone, glass, etc., and must therefore create a subdivision according to material which the system does not already provide, thus:

III2. .21=xylophone	sounding bodies of wood
III2. .22=metallophone	,, ,, metal

* This use of the symbols - :] is slightly different from that of the Classification Bibliographique Décimale, but is nevertheless within its spirit. The rules are: the hyphen is employed only in connection with the appended figures listed in the tables [at the end of each of the four main sections]; subdivisions beyond these are preceded by a colon (thus 422-62=reed instrument with flexible air reservoir, but 422-6 : 2=422.2-6=oboe with air reservoir); subdivision answering to the omission of a figure is preceded by a square bracket.

III2. .23=lithophone ,, ,, stone
 III2. .24=crystallophone ,, ,, glass.

28. Further stages in this classification of the xylophone would make use of morphological criteria significant from an ethnological point of view:

Classification

III2. .21.I **Bedded xylophone** The sounding bodies rest on an elastic foundation

III2. .21.II **Log xylophone** The foundation consists of separate logs.
 NB There is generally a shallow pit in the ground beneath the sounding bodies *Oceania, Indonesia, E. and W. Africa*

III2. .21.I2 **Frame xylophone** The bearers are joined by cross rods or bars

III2. .21.I2I* **Rail xylophone** The frame hangs from the player's neck on a sling and is kept clear of his body by a curved rail
S.E., E. and W. Africa

III2. .21.I22* **Table xylophone** The frame is borne on a trestle
Senegambia

III2. .21.I3 **Sledge xylophone** The sounding bodies lie across the edges of two boards
C. Africa

III2. .21.I4 (**Bedded**) **trough xylophone** The sounding bodies lie across the edges of a trough- or box-shaped vessel *Japan*

III2. .21.2 **Suspension xylophone** The sounding bodies lie on two cords without any other foundation

III2. .21.2I (**Free**) **suspension xylophone** Without case
Cochin China

III2. .21.22 (**Suspension**) **trough xylophone** With trough-shaped box
Burma, Java

* To be further subdivided thus:

1 Without resonators

2 With resonators

21 With resonators suspended singly

22 With resonators stuck into a common platform.

NB The resonators, in most cases gourds, often have holes sealed by a membrane, showing adulteration with 242 (vessel kazoos). Possibly the method of mounting the membranes (directly, or over a cone-shaped frame) will demand another subdivision. One can, however, dispense with adding another number since frame xylophones without resonators are unknown.

29. The systematic survey of musical instruments which now follows in tabular form is meant equally to serve the purposes of identification. Hence the descriptions of characteristics are here and there expanded to include warnings against likely misunderstandings and confusion.

Explanations and examples are kept to a minimum; the former are not intended as descriptions, nor the latter as notes on the history of cultures. Also, visual study of specimens far outvalues pages of written description. The expert will know what we are driving at, while the layman will be able to find his bearings with the aid of a visit to a museum.

Classification

- I IDIOPHONES** The substance of the instrument itself, owing to its solidity and elasticity, yields the sounds, without requiring stretched membranes or strings
- II Struck idiophones** The instrument is made to vibrate by being struck upon
- III Idiophones struck directly** The player himself executes the movement of striking; whether by mechanical intermediate devices, beaters, keyboards, or by pulling ropes, etc., is immaterial; it is definitive that the player can apply clearly defined individual strokes and that the instrument itself is equipped for this kind of percussion
 - III.I Concussion idiophones or clappers** Two or more complementary sonorous parts are struck against each other
 - III.II Concussion sticks or stick clappers** *Annam, India, Marshall Is.*
 - III.I2 Concussion plaques or plaque clappers** *China, India*
 - III.I3 Concussion troughs or trough clappers** *Burma*
 - III.I4 Concussion vessels or vessel clappers** Even a slight hollow in the surface of a board counts as a vessel
 - III.I4I Castanets** Vessel clappers, either natural, or artificially hollowed out
 - III.I42 Cymbals** Vessel clappers with everted rim
 - III.2 Percussion idiophones** The instrument is struck either with a non-sonorous object (hand, stick, striker) or against a non-sonorous object (human body, the ground)
 - III.2I Percussion sticks**
 - III.2II (Individual) percussion sticks** *Japan, Annam, Balkans; also the triangle*
 - III.2I2 Sets of percussion sticks** Several percussion sticks of different pitch are combined to form a single instrument
All xylophones, as long as their sounding components are not in two different planes [nicht biplan]
 - III.22 Percussion plaques**
 - III.22I (Individual) percussion plaques** *In the oriental Christian Church*
 - III.222 Sets of percussion plaques** *Lithophone (China), and most metallophones*
- III.23 Percussion tubes**

- III.231 (Individual) percussion tubes** *Slit drum, tubular bell*
- III.232 Sets of percussion tubes** *Tubaphon, tubular xylophone*
- III.24 Percussion vessels**
- III.241 Gongs** The vibration is strongest near the vertex
- III.241.1 (Individual) gongs**
S. and E. Asia; including the so-called metal drums, or rather kettle-gongs
S.E. Asia
- III.241.2 Sets of gongs** [*gong chimes*]
- III.242 Bells** The vibration is weakest near the vertex
- III.242.1 (Individual) Bells**
- III.242.11 Resting bells** The cup is placed on the palm of the hand or on a cushion; its mouth faces upwards
China, Indo-China, Japan
- III.242.12 Suspended bells** The bell is suspended from the apex
- III.242.121 Suspended bells struck from the outside.** No striker is attached inside the bell, there being a separate beater
- III.242.122 Clapper bells** A striker (clapper) is attached inside the bell
- III.242.2 Sets of bells** [*chimes*] (subdivided as III.242.1)
- II2 Indirectly struck idiophones** The player himself does not go through the movement of striking; percussion results indirectly through some other movement by the player. The intention of the instrument is to yield clusters of sounds or noises, and not to let individual strokes be perceived
- II2.2 Shaken idiophones or rattles** The player executes a shaking motion
- II2.11 Suspension rattles** Perforated idiophones are mounted together, and shaken to strike against each other
- II2.111 Strung rattles** Rattling objects are strung in rows on a cord
Necklaces with rows of shells
- II2.112 Stick rattles** Rattling objects are strung on a bar (or ring)
Sistrum with rings
- II2.12 Frame rattles** Rattling objects are attached to a carrier against which they strike
- II2.121 Pendant rattles** Rattling objects are hung from a frame
Dancing shield with rattling rings
- II2.122 Sliding rattles** Non-sonorous objects slide to and fro in the slots of the sonorous object so that the latter is made to vibrate; or sonorous objects slide to and fro in the slots of a non-sonorous object, to be set in vibration by the impacts
Anklung, sistrum with rods (recent)
- II2.13 Vessel rattles** Rattling objects enclosed in a vessel strike against each other or against the walls of the vessel, or usually against both. NB The Benue gourd rattles with handle, in which the rattling objects, instead of being enclosed, are knotted into a net slipped over the outer surface, count as a variety of vessel rattle

Fruit shells with seeds, 'pellet bells' enclosing loose percussion pellets

II2.2 Scraped idiophones The player causes a scraping movement directly or indirectly: a non-sonorous object moves along the notched surface of a sonorous object, to be alternately lifted off the teeth and flicked against them; or an elastic sonorous object moves along the surface of a notched non-sonorous object to cause a series of impacts. This group must not be confused with that of friction idiophones

II2.21 Scraped sticks A notched stick is scraped with a little stick

II2.211 Scraped sticks without resonator

S. America. India (notched musical bow), Congo

II2.212 Scraped sticks with resonator *Usumbara, E. Asia (tiger)*

II2.22 Scraped tubes *S. India*

II2.23 Scraped vessels The corrugated surface of a vessel is scraped

S. America, Congo region

II2.24 Scraped wheels or cog rattles A cog wheel, whose axle serves as the handle, and a tongue fixed in a frame which is free to turn on the handle; when whirled, the tongue strikes the teeth of the wheel one after another *Europe, India*

II2.3 Split idiophones Instruments in the shape of two springy arms connected at one end and touching at the other: the arms are forced apart by a little stick, to jingle or vibrate on recoil

China (huan t'u), Malacca, Persia (qasik), Balkans

12 Plucked idiophones Lamellae, i.e. elastic plaques, fixed at one end, are flexed and then released to return to their position of rest

121 In the form of a frame The lamella vibrates within a frame or hoop

121.1 Clack idiophones (cricri) The lamella is carved in the surface of a fruit shell, which serves as resonator *Melanesia*

121.2 Guimbardes (Jews' harps) The lamella is mounted in a rod- or plaque-shaped frame and depends on the player's mouth cavity for resonance

121.21 Idioglot guimbardes The lamella is carved in the frame itself, its base remaining joined to the frame

India, Indonesia, Melanesia

121.22 Heteroglot guimbardes A lamella is attached to a frame

121.221 (Single) heteroglot guimbardes *Europe, India, China*

121.222 Sets of heteroglot guimbardes Several heteroglot guimbardes of different pitches are combined to form a single instrument *Aura*

122 In board- or comb-form The lamellae are tied to a board or cut out from a board like the teeth of a comb

122.1 With laced-on lamellae

122.11 Without resonator *All sansas on a plain board*

122.12 With resonator *All sansas with a box or bowl below the board*

122.2 With cut-out lamellae (musical boxes) Pins on a cylinder pluck the lamellae *Europe*

13 Friction Idiophones The instrument is made to vibrate by friction

131 Friction sticks

131.1 (Individual) friction sticks *Unknown*

131.2 Sets of friction sticks

131.21 With direct friction The sticks themselves are rubbed
Nail fiddle, nail piano, Stocksplele

131.22 With indirect friction The sticks are connected with others which are rubbed and, by transmitting their longitudinal vibration, stimulate transverse vibration in the former
Chladni's euphon

132 Friction plaques

132.1 (Individual) friction plaques *Unknown*

132.2 Sets of friction plaques [*livika*] *New Ireland*

133 Friction vessels

133.1 (Individual) friction vessels *Brazil (tortoise shell)*

133.2 Sets of friction vessels *Verillon (glass harmonica)*

14 Blown idiophones The instrument is made to vibrate by being blown upon

141 Blown sticks

141.1 (Individual) blown sticks *Unknown*

141.2 Sets of blown sticks *Aeolsklavier*

142 Blown plaques

142.1 (Individual) blown plaques *Unknown*

142.2 Sets of blown plaques *Piano chanteur*

Suffixes for use with any division of this class (idiophones):

–8 with keyboard

–9 mechanically driven

2 MEMBRANOPHONES The sound is excited by tightly-stretched membranes

21 Struck drums The membranes are struck

211 Drums struck directly The player himself executes the movement of striking; this includes striking by any intermediate devices, such as beaters, keyboards, etc.; drums that are shaken are excluded

211.1 Kettle drums (timpani) The body is bowl- or dish-shaped

211.11 (Separate) kettle drums *European timpani*

211.12 Sets of kettle drums *W. Asian permanently joined pairs of kettle drums*

211.2 Tubular drums The body is tubular

- 2II.2I Cylindrical drums** The diameter is the same at the middle and the ends; whether or not the ends taper or have projecting disks, is immaterial
- 2II.2II Single-skin cylindrical drums** The drum has only one usable membrane. In some African drums a second skin forms part of the lacing device and is not used for beating, and hence does not count as a membrane in the present sense
- 2II.2II.1 Open cylindrical drums** The end opposite from the membrane is open *Malacca*
- 2II.2II.2 Closed cylindrical drums** The end opposite from the membrane is closed *West Indies*
- 2II.2I2 Double-skin cylindrical drums** The drum has two usable membranes
- 2II.2I2.1 (Individual) cylindrical drums** *Europe (side drum)*
- 2II.2I2.2 Sets of cylindrical drums**
- 2II.22* Barrel-shaped drums** The diameter is larger at the middle than at the ends; the body is curvilinear
Asia, Africa, Ancient Mexico
- 2II.23 Double-conical drums** The diameter is larger at the middle than at the ends; the body is rectilinear with angular profile
India (mrdanga, banya, pakhavaja)
- 2II.24* Hourglass-shaped drum** The diameter is smaller at the middle than at the ends
Asia, Melanesia, E. Africa
- 2II.25* Conical drums** The diameters at the ends differ considerably; minor departures from conicity, inevitably met, are disregarded here *India*
- 2II.26* Goblet-shaped drums** The body consists of a main section which is either cup-shaped or cylindrical, and a slender stem; borderline cases of this basic design like those occurring notably in Indonesia, do not affect the identification, so long as a cylindrical form is not in fact reached *Darabuka*
- 2II.3 Frame drums** The depth of the body does not exceed the radius of the membrane. NB The European side-drum, even in its most shallow form, is a development from the long cylindrical drum and hence is not included among frame drums
- 2II.31 Frame drums (without handle)**
- 2II.311 Single-skin frame drums** *Tambourine*
- 2II.312 Double-skin frame drums** *N. Africa*
- 2II.32 Frame drum with handle** A stick is attached to the frame in line with its diameter
- 2II.321 Single-skin frame drums with handle** *Eskimo*
- 2II.322 Double-skin frame drums with handle** *Tibet*
- 2I2 Rattle drums** (sub-divisions as for drums struck directly, 2II) The drum is shaken; percussion is by impact of pendant or

* To be sub-divided like 2II.2I.

- enclosed pellets, or similar objects *India, Tibet*
- 22 Plucked drums** A string is knotted below the centre of the membrane; when the string is plucked, its vibrations are transmitted to the membrane *India (gopi yantra, anandalahari)*
- 23 Friction drums** The membrane is made to vibrate by friction
- 231 Friction drums with stick** A stick in contact with the membrane is either itself rubbed, or is employed to rub the membrane
- 231.I With inserted stick** The stick passes through a hole in the membrane
- 231.II Friction drums with fixed stick** The stick cannot be moved; the stick alone is subjected to friction by rubbing *Africa*
- 231.I2 Friction drums with semi-fixed stick** The stick is movable to a sufficient extent to rub the membrane when it is itself rubbed by the hand *Africa*
- 231.I3 Friction drums with free stick** The stick can be moved freely; it is not itself rubbed, but is employed to rub the membrane *Venezuela*
- 231.2 With tied stick** The stick is tied to the membrane in an upright position *Europe*
- 232 Friction drum with cord** A cord, attached to the membrane, is rubbed
- 232.I Stationary friction drum with cord** The drum is held stationary *Europe, Africa*
- 232.II Single-skin stationary drums with friction-cord**
- 232.I2 Double-skin stationary drums with friction-cord**
- 232.2 Friction drum with whirling stick** The drum is whirled on a cord which rubs on a [resined] notch in the holding stick. *Waldteufel [cardboard buzzer] (Europe, India, E. Africa)*
- 233 Hand friction drums** The membrane is rubbed by the hand
- 24 Singing membranes (Kazoos)** The membrane is made to vibrate by speaking or singing into it; the membrane does not yield a note of its own but merely modifies the voice *Europe, W. Africa*
- 241 Free kazoos** The membrane is incited directly, without the wind first passing through a chamber *Comb-and-paper*
- 242 Tube- or vessel-kazoos** The membrane is placed inside a tube or box *Africa; while also, E. Asian flutes with a lateral hole sealed by a membrane, exhibit an adulteration with the principle of the tube kazoo*

Suffixes for use with any division of this class (membranophones):

- 6 with membrane glued to drum
- 7 with membrane nailed to drum
- 8 with membrane laced to drum
- 8I Cord-(ribbon-) bracing The cords are stretched from membrane to

membrane or arranged in the form of a net, without employing any of the devices described below

- 811 **Without special devices for stretching** *Everywhere*
 - 812 **With tension ligature** Cross ribbons or cords are tied round the middle of the lacing to increase its tension *Ceylon*
 - 813 **With tension loops** The cords are laced in a zigzag; every pair of strings is caught together with a small ring or loop *India*
 - 814 **With wedge-bracing** Wedges are inserted between the wall of the drum and the cords of the lacing; by adjusting the position of the wedges it is possible to control the tension
India, Indonesia, Africa
 - 82 **Cord-and-hide bracing** The cords are laced at the lower end to a non-sonorous piece of hide *Africa*
 - 83 **Cord-and-board bracing** The cords are laced to an auxiliary board at the lower end *Sumatra*
 - 84 **Cord-and-flange bracing** The cords are laced at the lower end to a flange carved from the solid *Africa*
 - 85 **Cord-and-belt bracing** The cords are laced at the lower end to a belt of different material *India*
 - 86 **Cord-and-peg bracing** The cords are laced at the lower end to pegs stuck into the wall of the drum *Africa*
- NB -82 to -86 are sub-divided as -81 above
- 9 **With membrane lapped on** A ring is slipped over the edge of the membrane
 - 91 **With membrane lapped on by ring of cord** *Africa*
 - 92 **With membrane lapped on by a hoop**
 - 921 **Without mechanism** *European drum*
 - 922 **With mechanism**
 - 9221 **Without pedal** *Machine timpani*
 - 9222 **With pedals** *Pedal timpani*

3 CHORDOPHONES One or more strings are stretched between fixed points

- 3I **Simple chordophones or zithers** The instrument consists solely of a string bearer, or of a string bearer with a resonator which is not integral and can be detached without destroying the sound-producing apparatus
- 3II **Bar zithers** The string bearer is bar-shaped; it may be a board placed edgewise
- 3II.I **Musical bows** The string bearer is flexible (and curved)
- 3II.II **Idiochord musical bows** The string is cut from the bark of the cane, remaining attached at each end
- 3II.III **Mono-idiochord musical bows** The bow has one idiochord string only *New Guinea (Sepik R.), Togo*

- 3II.II2 Poly-idiochord musical bows or harp-bows** The bow has several idiochord strings which pass over a toothed stick or bridge *W. Africa (Fan)*
- 3II.I2 Heterochord musical bows** The string is of separate material from the bearer
- 3II.I2I Mono-heterochord musical bows** The bow has one heterochord string only
- 3II.I2I.I Without resonator** NB If a separate, unattached resonator is used, the specimen belongs to 3II.I2I.2I. The human mouth is not to be taken into account as a resonator
- 3II.I2I.II Without tuning noose** *Africa (ganza, samuius, to)*
- 3II.I2I.I2 With tuning noose** A fibre noose is passed round the string, dividing it into two sections
South-equatorial Africa (n'kungo, uta)
- 3II.I2I.2 With resonator**
- 3II.I2I.2I With independent resonator** *Borneo (busoi)*
- 3II.I2I.22 With resonator attached**
- 3II.I2I.22I Without tuning noose** *S. Africa (hade, thomo)*
- 3II.I2I.222 With tuning noose** *S. Africa, Madagascar (gubo, hungo, bobre)*
- 3II.I22 Poly-heterochord musical bows** The bow has several heterochord strings
- 3II.I22.I Without tuning noose** *Oceania (kalove)*
- 3II.I22.2 With tuning noose** *Oceania (pagolo)*
- 3II.2 Stick zithers** The string carrier is rigid
- 3II.2I Musical bow cum stick** The string bearer has one flexible, curved end. NB Stick zithers with both ends flexible and curved, like the Basuto bow, are counted as musical bows *India*
- 3II.22 (True) stick zithers** NB Round sticks which happen to be hollow by chance do not belong on this account to the tube zithers, but are round-bar zithers; however, instruments in which a tubular cavity is employed as a true resonator, like the modern Mexican *harpa*, are tube zithers
- 3II.22I With one resonator gourd** *India (tuila), Celebes (suleppe)*
- 3II.222 With several resonator gourds** *India (vina)*
- 3I2 Tube zithers** The string bearer is a vaulted surface
- 3I2.I Whole-tube zithers** The string carrier is a complete tube
- 3I2.II Idiochord (true) tube zithers**
Africa and Indonesia (gonra, togo, valiha)
- 3I2.I2 Heterochord (true) tube zithers**
- 3I2.I2I Without extra resonator** *S.E. Asia (alligator)*
- 3I2.I22 With extra resonator** An internode length of bamboo is placed inside a palm leaf tied in the shape of a bowl *Timor*
- 3I2.2 Half-tube zithers** The strings are stretched along the convex surface of a gutter
- 3I2.2I Idiochord half-tube zithers** *Flores*

- 312.22 Heterochord half-tube zithers** *E. Asia (k'in, koto)*
- 313 Raft zithers** The string bearer is composed of canes tied together in the manner of a raft
- 313.1 Idiochord raft zithers** *India, Upper Guinea, Central Congo*
- 313.2 Heterochord raft zithers** *N. Nyasa region*
- 314 Board zithers** The string bearer is a board; the ground too is to be counted as such
- 314.1 True board zithers** The plane of the strings is parallel with that of the string bearer
- 314.11 Without resonator** *Borneo*
- 314.12 With resonator**
- 314.121 With resonator bowl** The resonator is a fruit shell or similar object, or an artificially carved equivalent *Nyasa region*
- 314.122 With resonator box (box zither)** The resonator is made from slats *Zither, Hackbrett, pianoforte*
- 314.2 Board zither variations** The plane of the strings is at right angles to the string bearer
- 314.21 Ground zithers** The ground is the string bearer; there is only one string *Malacca, Madagascar*
- 314.22 Harp zithers** A board serves as string bearer; there are several strings and a notched bridge *Borneo*
- 315 Trough zithers** The strings are stretched across the mouth of a trough *Tanganyika*
- 315.1 Without resonator**
- 315.2 With resonator** The trough has a gourd or a similar object attached to it
- 316 Frame zithers** The strings are stretched across an open frame
- 316.1 Without resonator** *Perhaps amongst medieval psalteries*
- 316.2 With resonator** *W. Africa, amongst the Kru (kani)*
- 32 Composite chordophones** A string bearer and a resonator are organically united and cannot be separated without destroying the instrument
- 321 Lutes** The plane of the strings runs parallel with the sound-table
- 321.1 Bow lutes** [*pluriarc*] Each string has its own flexible carrier *Africa (akam, kalangu, wambi)*
- 321.2 Yoke lutes or lyres** The strings are attached to a yoke which lies in the same plane as the sound-table and consists of two arms and a cross-bar
- 321.21 Bowl lyres** A natural or carved-out bowl serves as the resonator *Lyra, E. African lyre*
- 321.22 Box lyres** A built-up wooden box serves as the resonator *Cithara, crwth*
- 321.3 Handle lutes** The string bearer is a plain handle. Subsidiary necks, as e.g. in the Indian *prasari* *vina* are disregarded, as are also lutes with strings distributed over several necks, like

- the *harpolyre*, and those like the Lyre-guitars, in which the yoke is merely ornamental
- 321.31 Spike lutes** The handle passes diametrically through the resonator
- 321.311 Spike bowl lutes** The resonator consists of a natural or carved-out bowl
Persia, India, Indonesia
- 321.312 Spike box lutes or spike guitars** The resonator is built up from wood
Egypt (rebab)
- 321.313 Spike tube lutes** The handle passes diametrically through the walls of a tube
China, Indochina
- 321.32 Necked lutes** The handle is attached to or carved from the resonator, like a neck
- 321.321 Necked bowl lutes** *Mandoline, theorbo, balalaika*
- 321.322 Necked box lutes or necked guitars** NB Lutes whose body is built up in the shape of a bowl are classified as bowl lutes
Violin, viol, guitar
- 322 Harps** The plane of the strings lies at right angles to the sound-table; a line joining the lower ends of the strings would point towards the neck
- 322.1 Open harps** The harp has no pillar
- 322.11 Arched harps** The neck curves away from the resonator
Burma and Africa
- 322.12 Angular harps** The neck makes a sharp angle with the resonator
Assyria, Ancient Egypt, Ancient Korea
- 322.2 Frame harps** The harp has a pillar
- 322.21 Without tuning action** *All medieval harps*
- 322.211 Diatonic frame harps**
- 322.212 Chromatic frame harps**
- 322.212.1 With the strings in one plane** *Most of the older chromatic harps*
- 322.212.2 With the strings in two planes crossing one another**
The Lyon chromatic harp
- 322.22 With tuning action** The strings can be shortened by mechanical action
- 322.221 With manual action** The tuning can be altered by hand-levers
Hook harp, dital harp, harpinella
- 322.222 With pedal action** The tuning can be altered by pedals
- 323 Harp lutes** The plane of the strings lies at right angles to the sound-table; a line joining the lower ends of the strings would be perpendicular to the neck. Notched bridge
W. Africa (kasso, etc.)

Suffixes for use with any division of this class (chordophones):

- 4 **sounded by hammers or beaters**
- 5 **sounded with the bare fingers**
- 6 **sounded by plectrum**
- 7 **sounded by bowing**
- 71 **with a bow**

- 72 by a wheel
- 73 by a ribbon [*Band*]
- 8 with keyboard
- 9 with mechanical drive

4 AEROPHONES The air itself is the vibrator in the primary sense

41 Free aerophones The vibrating air is not confined by the instrument

411 Displacement free aerophones The air-stream meets a sharp edge, or a sharp edge is moved through the air. In either case, according to more recent views, a periodic displacement of air occurs to alternate flanks of the edge *Whip, sword-blade*

412 Interruptive free aerophones The air-stream is interrupted periodically

412.1 Idiophonic interruptive aerophones or reeds The air-stream is directed against a lamella, setting it in periodic vibration to interrupt the stream intermittently. In this group also belong reeds with a 'cover', i.e. a tube in which the air vibrates only in a secondary sense, not producing the sound but simply adding roundness and timbre to the sound made by the reed's vibration; generally recognizable by the absence of fingerholes *Organ reed stops*

412.11 Concussion reeds Two lamellae make a gap which closes periodically during their vibration *A split grass-blade*

412.12 Percussion reeds A single lamella strikes against a frame

412.121 Individual percussion reeds *Brit. Columbia*

412.122 Sets of percussion reeds *The earlier reed stops of organs*

412.13 Free reeds The lamella vibrates through a closely-fitting slot

412.131 (Individual) free reeds *Single-note motor horn*

412.132 Sets of free reeds NB In instruments like the Chinese *sheng* the fingerholes do not serve to modify the pitch and are therefore not equivalent to the fingerholes of other pipes

Reed organ, mouthorgan, accordion

412.14 Ribbon reeds The air-stream is directed against the edge of a stretched band or ribbon. The acoustics of this process has not yet been studied *Brit. Columbia*

412.2 Non-idiophonic interruptive instruments The interruptive agent is not a reed

412.21 Rotating aerophones The interruptive agent rotates in its own plane *Sirens*

412.22 Whirling aerophones The interruptive agent turns on its axis *Bull-roarer, whirling disc, ventilating fan*

413 Plosive aerophones The air is made to vibrate by a single density stimulus condensation shock *Pop guns*

- 42 Wind instruments proper** The vibrating air is confined within the instrument itself
- 42I Edge instruments or flutes** A narrow stream of air is directed against an edge
- 42I.I Flutes without duct** The player himself creates a ribbon-shaped stream of air with his lips
- 42I.II End-blown flutes** The player blows against the sharp rim at the upper open end of a tube
- 42I.III (Single) end-blown flutes**
- 42I.III.I Open single end-blown flutes** The lower end of the flute is open
- 42I.III.II Without fingerholes** *Bengal*
- 42I.III.I2 With fingerholes** *Almost world-wide*
- 42I.III.2 Stopped single end-blown flutes** The lower end of the flute is closed
- 42I.III.2I Without fingerholes** *The bore of a key*
- 42I.III.22 With fingerholes** *Especially New Guinea*
- 42I.II2 Sets of end-blown flutes or panpipes** Several end-blown flutes of different pitch are combined to form a single instrument
- 42I.II2 Open panpipes**
- 42I.II2.II Open (raft) panpipes** The pipes are tied together in the form of a board, or they are made by drilling tubes in a board
China
- 42I.II2.2 Open bundle (pan-) pipes** The pipes are tied together in a round bundle
Solomon Is., New Britain, New Ireland, Admiralty Is.
- 42I.II2.2 Stopped panpipes** *Europe, S. America*
- 42I.II2.3 Mixed open and stopped panpipes** *Solomon Is., S. America*
- 42I.I2 Side-blown flutes** The player blows against the sharp rim of a hole in the side of the tube
- 42I.I2I (Single) side-blown flutes**
- 42I.I2I.I Open side-blown flutes**
- 42I.I2I.II Without fingerholes** *S.W. Timor*
- 42I.I2I.I2 With fingerholes** *European flute*
- 42I.I2I.2 Partly-stopped side-blown flutes** The lower end of the tube is a natural node of the pipe pierced by a small hole
N.W. Borneo
- 42I.I2I.3 Stopped side-blown flutes**
- 42I.I2I.3I Without fingerholes**
- 42I.I2I.3II With fixed stopped lower end** *Apparently non-existent*
- 42I.I2I.3I2 With adjustable stopped lower end** (piston flutes)
Malacca, New Guinea
- 42I.I2I.32 With fingerholes** *E. Bengal, Malacca*
- 42I.I22 Sets of side-blown flutes**
- 42I.I22.I Sets of open side-blown flutes** *Chamber flute orum*

42I.122.2. Sets of stopped side-blown flutes

N.W. Brazil (among the Siusi)

42I.13 Vessel flutes (without distinct beak) The body of the pipe is not tubular but vessel-shaped

Brazil (Karaja), Lower Congo (Bafioté)

42I.2 Flutes with duct or duct flutes A narrow duct directs the air-stream against the sharp edge of a lateral orifice

42I.21 Flutes with external duct The duct is outside the wall of the flute; this group includes flutes with the duct chamfered in the wall under a ring-like sleeve and other similar arrangements

42I.211 (Single) flutes with external duct

42I.211.1 Open flutes with external duct

42I.211.11 Without fingerholes

China, Borneo

42I.211.12 With fingerholes

Indonesia

42I.211.2 Partly-stopped flutes with external duct

Malacca

42I.211.3 Stopped flutes with external duct

42I.212 Sets of flutes with external duct

Tibet

42I.22 Flutes with internal duct The duct is inside the tube. This group includes flutes with the duct formed by an internal baffle (natural node, block of resin) and an exterior tied-on cover (cane, wood, hide)

42I.221 (Single) flutes with internal duct

42I.221.1 Open flutes with internal duct

42I.221.11 Without fingerholes

European signalling whistle

42I.221.12 With fingerholes

Recorder

42I.221.2 Partly-stopped flute with internal duct

India and Indonesia

42I.221.3 Stopped flutes with internal duct

42I.221.31 Without fingerholes

42I.221.311 With fixed stopped lower end

European signalling whistle

42I.221.312 With adjustable stopped lower end

Piston pipes [swanee whistle]

42I.221.4 Vessel flutes with duct

42I.221.41 Without fingerholes

Zoomorphic pottery whistles (Europe, Asia)

42I.221.42 With fingerholes

Ocarina

42I.222 Sets of flutes with internal duct

42I.222.1 Sets of open flutes with internal duct

42I.222.11 Without fingerholes

Open flue stops of the organ

42I.222.12 With fingerholes

Double flageolet

42I.222.2 Sets of partly-stopped flutes with internal duct

Rohrflöte stops of the organ

42I.222.3 Sets of stopped flutes with internal duct

Stopped flue stops of the organ

- 422 Reedpipes** The air-stream has, through means of two lamellae placed at the head of the instrument, intermittent access to the column of air which is to be made to vibrate
- 422.I Oboes** The pipe has a [double] reed of concussion lamellae (usually a flattened stem)
- 422.II (Single) oboes**
- 422.III With cylindrical bore**
- 422.III.I Without fingerholes** *Brit. Columbia*
- 422.III.2 With fingerholes** *Aulos, crumhorn*
- 422.II2 With conical bore** *European oboe*
- 422.I2 Sets of oboes**
- 422.I2I With cylindrical bore** *Double aulos*
- 422.I22 With conical bore** *India*
- 422.2 Clarinets** The pipe has a [single] 'reed' consisting of a percussion lamella
- 422.2I (Single) clarinets**
- 422.2II With cylindrical bore**
- 422.2II.I Without fingerholes** *Brit. Columbia*
- 422.2II.2 With fingerholes** *European clarinet*
- 422.2I2 With conical bore** *Saxophone*
- 422.22 Sets of clarinets** *Egypt (zummarā)*
- 422.3 Reedpipes with free reeds** The reed vibrates through [at] a closely-fitted frame. There must be fingerholes, otherwise the instrument belongs to the free reeds 412.I3 *S.E. Asia*
- 422.3I Single pipes with free reed**
- 422.32 Double pipes with free reeds**
- 423 Trumpets** The air-stream passes through the player's vibrating lips, so gaining intermittent access to the air column which is to be made to vibrate
- 423.I Natural trumpets** Without extra devices to alter pitch
- 423.II Conches** A conch shell serves as trumpet
- 423.III End-blown**
- 423.III.I Without mouthpiece** *India*
- 423.III.2 With mouthpiece** *Japan (rappakai)*
- 423.II2 Side-blown** *Oceania*
- 423.I2 Tubular trumpets**
- 423.I2I End-blown grumpets** The mouth-hole faces the axis of the trumpet
- 423.I2I.I End-blown straight trumpets** The tube is neither curved nor folded
- 423.I2I.II Without mouthpiece** *Some alphorns*
- 423.I2I.I2 With mouthpiece** *Almost world-wide*
- 423.I2I.2 End-blown horns** The tube is curved or folded
- 423.I2I.2I Without mouthpiece** *Asia*
- 423.I2I.22 With mouthpiece** *Lurs*

- 423.122 Side-blown trumpets** The embouchure is in the side of the tube
423.122.1 Side-blown straight trumpets *S. America*
423.122.2 Side-blown horns *Africa*
423.2 Chromatic trumpets With extra devices to modify the pitch
423.21 Trumpets with fingerholes *Cornetti, key bugles*
423.22 Slide trumpets The tube can be lengthened by extending a telescopic section of the instrument *European trombone*
423.23 Trumpets with valves The tube is lengthened or shortened by connecting or disconnecting auxiliary lengths of tube *Europe*
423.231 Valve bugles The tube is conical throughout
423.232 Valve horns The tube is predominantly conical
423.233 Valve trumpets The tube is predominantly cylindrical

Suffixes for use with any division of this class (aerophones):

- 6 with air reservoir
- 61 with rigid air reservoir
- 62 with flexible air reservoir
- 7 with fingerhole stopping
- 71 with keys
- 72 with *Bandmechanik* [presumably a perforated roll or ribbon]
- 8 with keyboard
- 9 with mechanical drive

TRANSLATORS' GLOSSARY

SHOWING CERTAIN TERMS EMPLOYED AND
THEIR EQUIVALENTS IN THE ORIGINAL

Arched harps, <i>Bogenharfen</i>	Conical drums, <i>Konustrommeln</i>
Barrel-shaped drums, <i>Fasstrommeln</i>	Double conical, <i>Doppelkonus-</i>
Beater, <i>Schlägel</i>	'Cover' (in interruptive aerophones, 412.1), ' <i>Ausatz</i> '
Bow-lutes, <i>Bogenlauten</i>	Cylindrical drums, <i>Zylindertrommeln</i>
Bowl-, <i>Schalen-</i>	Dish-shaped, <i>Schalenförmig</i>
Box zither, <i>Kastenzyther</i>	Displacement aerophone, <i>Ablenkungs-aerophone</i>
Clack idiophone [cf. Sachs's <i>Knackholz</i>], <i>Cricri</i>	Duct, <i>Kernspalte</i>
Clapper bells, <i>Klöppelglocken</i>	- flutes with external duct, <i>Aussen-spaltflöten</i>
Clappers, <i>Klappern</i>	- flutes with internal duct, <i>Innen-spaltflöten</i>
Cog rattles [Ratchet rattles], <i>Ratschen</i>	
Conches, <i>Schneckenstrompeten</i>	
Concussion, <i>Gegenschlag-</i>	

Edge instruments, *Schneideninstrumente*
 End-blown (in conches), *mit endständigen Mundloch*
 – flutes, *Längsflöten*
 – tubular trumpets, *Längstrompeten*
 Free reeds, *Durchschlagzungen*
 Free-reed pipes, *Durchschlagzungen-Schalmeien*
 Friction, *Reib-, Reibung*
 Friction drums with fixed stick, *Fesselstab-Reibtrommeln*
 – semifixed stick, *Halbfreistab-Reibtr.*
 – cord, *Schnur-Reibtrommeln*
 – twirling stick, *Geschwungene Schnur-Reibtr.*
 Goblet-shaped, *Becher-*
 Ground zithers, *Erdzithern*
 Guimbarde, *Maultrommel*
 Handle lutes, *Stiellauten*
 Hanging bells, *Hängeglocken*
 Harp-bow, *Harfebogen*
 Individual, *selbständige*
 Interruptive aerophone, *Unterbrechungs-aerophone*
 Kazoos, *Mirlitons*
 Kettle gongs, *Kesselgongs*
 Lamella, *Zunge, Lamella*
 Musical-bow-cum-stick, *Musikbogenstäbe*
 Necked lutes, *Halslauten*
 Noose: tuning noose, *Stimmschlinge*
 Notched musical bow, *Kerb-Musikbogen*
 Open harps, *Bügelharfen*
 Pellet bells, *Schellen*
 Pendant rattles, *Pendelrasseln*
 Percussion, *Aufschlag-*
 Piston flutes, *Stempelflöten*
 Plaques, *Platten*

Plosive aerophones, *Explosiv-aerophone*
 Plucked, *Zupf-*
 Rattle, *Rassel*
 Reedpipes, *Schalmeien*
 Resting bells, *Standglocken*
 Ribbon reeds, *Bandzungen*
 Set of, *-spiele*
 Shaken idiophones, *Schüttel-Idiophone*
 Side-blown (in conch), *mit seitenständigen Mundloch*
 – flutes, *Querflöten*
 Singing membrane, *Ansingtrommeln*
 Siren, *Lochsirene, Wellensirene*
 Slit drums, *Holztrommeln*
 Spike lutes, *Spiesslauten*
 Split idiophones, *Reiss-Idiophone*
 Stationary (in friction drums), *stehende*
 Stick, *Stab-*
 Sticks, *Stäbe*
 Stick zithers, *Musikstäbe*
 Stopped (in flutes), *gedackt*
 Stopped lower end (in flutes), *Mündungsboden*
 Straight trumpets: end-blown, *Längstuben*
 – side-blown, *Quertuben*
 Striker, internal striker (in bells), *Klöppel*
 Struck idiophones, *Schlag-Idiophone*
 String bearer, *Saitenträger*
 Strung rattles, *Schnurrasseln*
 Suspension rattles, *Reihenrasseln*
 Trough zithers, *Schalenzithern*
 Valve bugles, *Signalhörner*
 – horns, *Waldhörner*
 – trumpets, *Trompeten*
 Vertex, *Scheitel*
 Vessel, *Gefäß-*
 Whole-tube (in zithers), *Vollröhren*

For French terminology see André Schaeffner's section *Adaptation française de la classification des Professeurs E.M.v.Hornbostel et C.Sachs* in *Encyclopédie Française* Vol.xvi, 1935, pp. 16'36-15/16.