Sachs-Hornbostel Classification of Musical Instruments

1 **IDIOPHONES** The substance of the instrument itself, owing to its solidity and elasticity, yields the sounds, without requiring stretched membranes or strings

11 **Struck idiophones** The instrument is made to vibrate by being struck upon

111 **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

111.1 **Concussion idiophones or clappers** Two or more complementary sonorous parts are struck against each other

111.11 **Concussion sticks or stick clappers** *Annarn, India, Marshall Is.*

111.12 **Concussion plaques or plaque clappers** *China, India*

111.13 **Concussion troughs or trough clappers** *Burma*

111.14 **Concussion vessels or vessel clappers** Even a slight hollow in the surface of a board counts as a vessel

111.141 **Castanets** Vessel clappers, either natural, or artificially hollowed out

111.142 **Cymbals** Vessel clappers with everted rim

111.2 **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)

111.21 **Percussion sticks**

111.211 (**Individual**) **percussion sticks** *Japan, Annam, Balkans; also the triangle*

111.212 **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]

111.22 **Percussion plaques**

111.221 (**Individual**) **percussion plaques** *In the oriental Christian Church*

111.222 **Sets of percussion plaques**

Lithophone (China), and most metallophones

111.23 **Percussion tubes**

111.231 (**Individual**) **percussion tubes** *Slit drum, tubular bell*

111.232 **Sets of percussion tubes** *Tubaphon, tubular xylophone*

111.24 **Percussion vessels**

111.241 **Gongs** The vibration is strongest near the vertex

111.241.1 (**Individual**) **gongs**

S. and E. Asia; including the so-called metal drums, or rather kettle-gongs

111.242.11 **Sets of gongs** *[gong chimes]* *S.E. Asia*

111.242 **Bells** The vibration is weakest near the vertex

111.242.1 (**Individual**) **Bells**

111.242.2 **Resting bells** The cup is placed on the palm of the hand or on a cushion; its mouth faces upwards

China, Indo-China, Japan

111.242.12 **Suspended bells** The bell is suspended from the apex

111.242.121 **Suspended bells struck from the outside.** No striker is attached inside the bell, there being a separate beater

111.242.122 **Clapper bells** A striker (clapper) is attached inside the bell

111.242.2 **Sets of bells** [*chimes*] (subdivided as 111.242.1)

112 **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

112.2 **Shaken idiophones or rattles** The player executes a shaking motion

112.11 **Suspension rattles** Perforated idiophones are mounted together, and shaken to strike against each other

112.111 **Strung rattles** Rattling objects are strung in rows on a cord

Necklaces with rows of shells

112.112 **Stick rattles** Rattling objects are strung on a bar (or ring) *Sistrum with rings*

112.12 **Frame rattles** Rattling objects are attached to a carrier against which they strike

112.121 **Pendant rattles** Rattling objects are hung from a frame

Dancing shield with rattling rings

112.122 **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)

112.13 **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

112.2 **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

112.21 **Scraped sticks** A notched stick is scraped with a little stick

112.211 **Scraped sticks without resonator**
S. America. India (notched musical bow), Congo

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

112.22 **Scraped tubes** *S. India*

112.23 **Scraped vessels** The corrugated surface of a vessel is scraped
S. America, Congo region

112.24 **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*

112.3 **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, Stockspiele*

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	
211.21	**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	
211.211	**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	
211.211.1	**Open cylindrical drums** The end opposite from the membrane is open	*Malacca*
211.211.2	**Closed cylindrical drums** The end opposite from the membrane is closed	*West Indies*
211.212.1	**Double-skin cylindrical drums** The drum has two usable membranes	
211.212.1	(**Individual**) **cylindrical drums**	*Europe (side drum)*
211.212.2	**Sets of cylindrical drums**	
211.22*	**Barrel-shaped drums** The diameter is larger at the middle than at the ends; the body is curvilinear	*Asia, Africa, Ancient Mexico*
211.23	**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)*
211.24*	**Hourglass-shaped drum** The diameter is smaller at the middle than at the ends	*Asia, Melanesia, E. Africa*

211.25* **Conical drums** The diameters at the ends differ considerably ; minor departures from conicity, inevitably met, are disregarded here *India*

211.26* **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*

211.3 **Frame drums** The depth of the body does not exceed the radius of the membrane. N.B. 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

211.31 **Frame drums** (**without handle**)

211.311 **Single-skin frame drums** *Tambourine*

211.312 **Double-skin frame drums** *N. Africa*

211.32 **Frame drum with handle** A stick is attached to the frame in line with its diameter

211.321 **Single-skin frame drums with handle** *Eskimo*

211.322 **Double-skin frame drums with handle** *Tibet*

212 **Rattle drums** (sub-divisions as for drums struck directly, 211) The drum is shaken; percussion is by impact of pendant or 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

231.1 **With inserted stick** The stick passes through a hole in the membrane

231.11 **Friction drums with fixed stick** The stick cannot be moved; the stick alone is subjected to friction by rubbing *Africa*

231.12 **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*

231.13 **Friction drums with free stick** The stick can be moved freely; it is not itself rubbed, but is employed to rub the membrane *Venezuela*

*To be sub-divided like 211.21.

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

232.1 **Stationary friction drum with cord** The drum is held stationary

Europe, Africa

232.11 **Single-skin stationary drums with friction-cord**

232.12 **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
-81 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*

N.B. -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

31 **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

311 **Bar zithers** The string bearer is bar-shaped; it may be a board placed edgewise

311.1 **Musical bows** The string bearer is flexible (and curved)

311.11 **Idiochord musical bows** The string is cut from the bark of the cane, remaining attached at each end

311.111 **Mono-idiochord musical bows** The bow has one idiochord string only *New Guinea (Sepik R.), Togo*

311.12 **Poly-idiochord musical bows or harp-bows** The bow has several idiochord strings which pass over a toothed stick or bridge *W. Africa (Fan)*

311.12 **Heterocbord musical bows** The string is of separate material from the bearer

311.121 **Mono-beterocbord musical bows** The bow has one hetero-chord string only

311.121.1 **Without resonator** N.B. If a separate, unattached resonator is used, the specimen belongs to 311.121.21. The human mouth is not to be taken into account as a resonator

311.121.11 **Without tuning noose** *Africa (ganza, samuius, to)*

311.121.12 **With tuning noose** A fibre noose is passed round the string, dividing it into two sections *South-equatorial Africa (n'kungo, uta)*

311.121.2 **With resonator**

311.121.21 **With independent resonator** *Borneo (busoi)*

311.121.22 **With resonator attached**

311.121.221 **Without tuning noose** *S. Africa (hade, thomo)*

311.121.222 **With tuning noose** *S. Africa, Madagascar (gubo, hungo, bobre)*

311.122 **Poly-heterochord musical bows** The bow has several hetero-chord strings

311.122.1 **Without tuning noose** *Oceania (kalove)*

311.122.2 **With tuning noose** *Oceania (pagolo)*

311.2 **Stick zithers** The string carrier is rigid

311.21 **Musical bow cum stick** The string bearer has one flexible, curved end. N.B. Stick zithers with both ends flexible and curved, like the Basuto bow, are counted as musical bows *India*

311.22 (**True**) **stick zithers** N.B. 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 modem Mexican *harpa*, are tube zithers

311.221 **With one resonator gourd** *India (tuila), Celebes (suleppe)*

311.222 **With several resonator gourds** *India (vina)*

312 **Tube zithers** The string bearer is a vaulted surface

312.1 **Whole-tube zithers** The string carrier is a complete tube

312.11 **Idiochord** (**true**) **tube zithers** *Africa and Indonesia (gonra, togo, valiha)*

312.12 **Heterochord** (**true**) **tube zithers**

312.121 **Without extra resonator** *S.E. Asia (alligator)*

312.122 **With extra resonator** An internode length of bamboo is placed inside a palm leaf tied in the shape of a bowl *Timor*

312.2 **Half-tube zithers** The strings are stretched along the convex surface of a gutter

312.21 **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 *prasarini 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** N.B. 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** N.B. 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, whirring 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

421 **Edge instruments or flutes** A narrow stream of air is directed against an edge

421.1 **Flutes without duct** The player himself creates a ribbon-shaped stream of air with his lips

421.11 **End blown flutes** The player blows against the sharp rim at the upper open end of a tube

421.111 (**Single**) **end-blown flutes**

421.111.1 **Open single end-blown flutes** The lower end of the flute is open

421.111.11 **Without fingerholes** *Bengal*

421.111.12 **With fingerholes** *Almost world-wide*

421.111.2 **Stopped single end-blown flutes** The lower end of the flute is closed

421.111.21 **Without fingerholes** *The bore of a key*

421.111.22 **With fingerholes** *Especially New Guinea*

421.112 **Sets of end-blown flutes or panpipes** Several end-blown flutes of different pitch are combined to form a single instrument

421.112 **Open panpipes**

421.112.11 **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*

421.112.12 **Open bundle** (**pan-**) **pipes** The pipes are tied together in a round bundle

Solomon Is., New Britain, New Ireland, Admiralty Is.

421.112.2 **Stopped panpipes** *Europe, S. America*

421.112.3 **Mixed open and stopped panpipes** *Solomon Is., S. America*

421.12 **Side-blown flutes** The player blows against the sharp rim of a hole in the side of the tube

421.121 (**Single**) **side-blown flutes**

421.121.1 **Open side-blown flutes**

421.121.11 **Without fingerholes** *S.W. Timor*

421.121.12 **With fingerholes** *European flute*

421.121.2 **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*

421.121.3 **Stopped side-blown flutes**

421.121.31 **Without fingerholes**

421.121.311 **With fixed stopped lower end** *Apparently non-existent*

421.121.312 **With adjustable stopped lower end** (piston flutes) *Malacca, New Guinea*

421.121.32 **With fingerholes** *E. Bengal, Malacca*

421.122 **Sets of side-blown flutes**

421.122.1 **Sets of open side-blown flutes** *Chamber flute orum*

421.122.2 **Sets of stopped side-blown flutes** *N. W. Brazil (among the Siusi)*

421.13 **Vessel flutes** (**without distinct beak**) The body of the pipe is not tubular but vessel-shaped *Brazil (Karaja), Lower Congo (Bafiote)*

421.2 **Flutes with duct or duct flutes** A narrow duct directs the air- stream against the sharp edge of a lateral orifice

421.21 **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

421.211 (**Single**) **flutes with external duct**

421.211.1 **Open flutes with external duct**

421.211.11 **Without fingerholes** *China, Borneo*

421.211.12 **With fingerholes** *Indonesia*

421.211.2 **Partly-stopped flutes with external duct** *Malacca*

421.211.3 **Stopped flutes with external duct**

421.212 **Sets of flutes with external duct** *Tibet*

421.22	**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)	
421.211	(**Single**) **flutes with internal duct**	
421.221.1	**Open flutes with internal duct**	
421.221.11	**Without fingerholes**	*European signalling whistle*
421.221.12	**With fingerholes**	*Recorder*
421.221.2	**Partly-stopped flute with internal duct**	*India and Indonesia*
421.221.3	**Stopped flutes with internal duct**	
421.221.31	**Without fingerholes**	
421.221.311	**With fixed stopped lower end**	*European signalling whistle*
421.221.312	**With adjustable stopped lower end**	*Piston pipes [swannee whistle]*
421.221.4	**Vessel flutes with duct**	
421.221.41	**Without fingerholes**	*Zoomorphic pottery whistles (Europe, Asia)*
421.221.42	**With fingerholes**	*Ocarina*
421.222	**Sets of flutes with internal duct**	
421.222.1	**Sets of open flutes with internal duct**	
421.222.11	**Without fingerholes**	*Open flue stops of the organ*
421.222.12	**With fingerholes**	*Double flageolet*
421.222.2	**Sets of partly-stopped flutes with internal duct**	*Rohrflöte stops of the organ*
421.222.3	**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	
422.1	**Oboes** The pipe has a [double] reed of concussion lamellae (usually a flattened stem)	
422.11	(**Single**) **oboes**	
422.111	**With cylindrical bore**	
422.111.1	**Without fingerholes**	*Brit. Columbia*
411.111.2	**With fingerholes**	*Aulos, crumhorn*
422.112	**With conical bore**	*European oboe*
422.12	**Sets of oboes**	

422.121	**With cylindrical bore**	*Double aulos*
422.122	**With conical bore**	*India*
422.2	**Clarinets** The pipe has a [single] 'reed' consisting of a percussion lamella	
422.21	(**Single**) **clarinets**	
422.211	**With cylindrical bore**	
422.211.1	**Without fingerholes**	*Brit. Columbia*
422.211.2	**With fingerholes**	*European clarinet*
422.212	**With conical bore**	*Saxophone*
422.22	**Sets of clarinets**	*Egypt (zummara)*
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 412.13	*S.E. Asia*
422.31	**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	
423.1	**Natural trumpets** Without extra devices to alter pitch	
423.11	**Conches** A conch shell serves as trumpet	
423.111	**End-blown**	
423.111.1	**Without mouthpiece**	*India*
423.111.2	**With mouthpiece**	*Japan (rappakai)*
423.112	**Side-blown**	*Oceania*
423.12	**Tubular trumpets**	
423.121	**End-blown trumpets** The mouth-hole faces the axis of the trumpet	
423.121.1	**End-blown straight trumpets** The tube is neither curved nor folded	
423.121.11	**Without mouthpiece**	*Some alphorns*
423.121.12	**With mouthpiece**	*Almost world-wide*
423.121.2	**End-blown horns** The tube is curved or folded	
423.121.21	**Without mouthpiece**	*Asia*
423.121.22	**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*

423.122.1 **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