

tive feature of this principle, compared with that of beating reeds with which our reed-organs are provided, is that, given a fixed mouthpiece in both, increased wind pressure produces a dynamic variation in sound in the case of the free reed, and the next possible harmonic of the series in the case of the beating reed or single reed. Performer is shown stopping the vent-holes of the pipes which he desires to sound.

Whistle-pipe. Pipe very similar to our so-called penny whistle, an instrument considerably easier to play than the transverse flute. In the latter the player learns to compress his breath in an even stream and to direct it against the sharp edge of the embouchure; in the whistle mouthpiece this is mechanically done for him, by means of the narrow channel through which he blows.

Castanets (?). It is probable that the small figure directly above the musician with the clappers, and opposite the similar figure of the drummer, is playing the castanets.

Ch. lv. 0033. Similar orchestra to that of Ch. lii. 003 is grouped L. and R. of a dancer. On L. of picture, commencing from top, is a lute of exactly the same type, having the same structural features and ornamentation; a whistle-pipe, more roughly drawn than that in Ch. lii. 003; and clappers of the same kind. On R., at the top, a harp of same kind showing no strings, a *cheng* more roughly drawn, and a transverse flute held to the L. with the L. hand covering the lower holes. This flute is provided with a hook fixed above the embouchure, on under side, for hanging to belt.

Ch. xxxviii. 004. Orchestra grouped R. and L., consisting on L. of a *cheng* and a lute; on R. of a long psaltery and clappers; all similar to those already described. The lute, which is played by means of a vermilion plectrum, has also the head bent back at right angles in Persian style (see Ch. lii. 003; liv. 007; lv. 0033).

Ch. 0051. Musicians on R. and L. of dancer. To L. are playing a set of four clappers and a whistle-pipe; on R., a transverse flute held towards the L. and a *cheng* with large wind reservoir and comparatively short pipes (see same paintings as Ch. 0051).

Ch. liv. 007. Single musician playing upon large lute, with a very long plectrum expanding at the striking end in shape of fan. The lute, a tenor or bass, is similar to those represented on the other silks described above, except that the head is bent back at right angles in the Persian style (which increased the tension of the strings) and that there are three small bridges probably misplaced by the artist very near the end of the finger-board, and possibly used for sympathetic strings. A man at the head of the chariot is playing upon a sistrum.

B.—SILK BANNERS

Ch. xlix. 005. Two musicians in the upper part of picture, one playing on instrument of flageolet type, with whistle mouthpiece, or possibly with a reed placed inside a capsule and set in vibration by the breath through a slit or opening in the top of the capsule; the second playing a set of large wooden clappers strung on a gut or thong passing through holes at the top of the clappers, which are pulled out and struck together at the base.

Ch. lv. 0011. One musician with pillarless harp, usually supported on the ground by means of a spike. The curved wooden sound-chest to the L. of the instrument serves also as string-plate, the sound-board being pierced with holes through which the strings are threaded and fixed by means of a knot on the inside. The tension is regulated round the horizontal bamboo rod by means of various devices.

II. MUSICAL INSTRUMENTS REPRESENTED IN TERRA-COTTA FIGURINES

Yo. 02. Two musicians: (a) the one on R. playing a transverse flute, blown from an embouchure at the side as at the present day. The modeller has retained the beard of the musician and sacrificed realism in playing the instrument; for the beard covers the embouchure. The flute has a cylindrical bore, and appears to have had at least eight holes from the position of the hands, which are correctly placed, the R. governing the lower holes, the L. the upper. Cf. similar instrument on the relieve slabs from Amarāvati, Brit. Mus.

(b) The musician to L. is playing a pair of bell-shaped cymbals held together by a ribbon or thong. These cymbals, known as the ancient cymbals, give a sound of definite musical pitch, and with this object are sounded by striking one against the other, not by clashing them with a sweeping frictional movement, as is the case with the modern plate-shaped cymbals, which are incapable of producing any musical sound of definite pitch.

Yo. 0021. Musician dancing, and playing upon a stringed

instrument having an almost oval body, connected by a short neck to an oval head. This type of instrument, familiar in Europe from the eleventh century, has affinities with the oval Nefer of the Egyptians and with a certain type of oval Persian tambour introduced into Europe by the Moors. The three or four strings were plucked by the fingers.

Yo. 003. 1. Monkey playing on the large pear-shaped lute or Rabāb, with three strings, similar to those found on the risers (?) of the steps from a Gandhāra shrine (Brit. Mus.) and on a Sassanian silver dish (Brit. Mus.). This instrument was of high antiquity, the earliest known example being shown on a terra-cotta statuette of Greek post-Mycenean work found on the site of Goshen (in Egypt?), assigned to 1000 B.C. (Flinders Petrie). It was the archetype of the lute, which, when the bow was applied to it, became known as the Rabāb.

Yo. 003. m. Monkey holding lute similar to that in above.

Yo. 003. d. Musician playing syrinx of eight pipes