DENVER ART MUSEUM

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DEPARTMENT OF INDIAN ART

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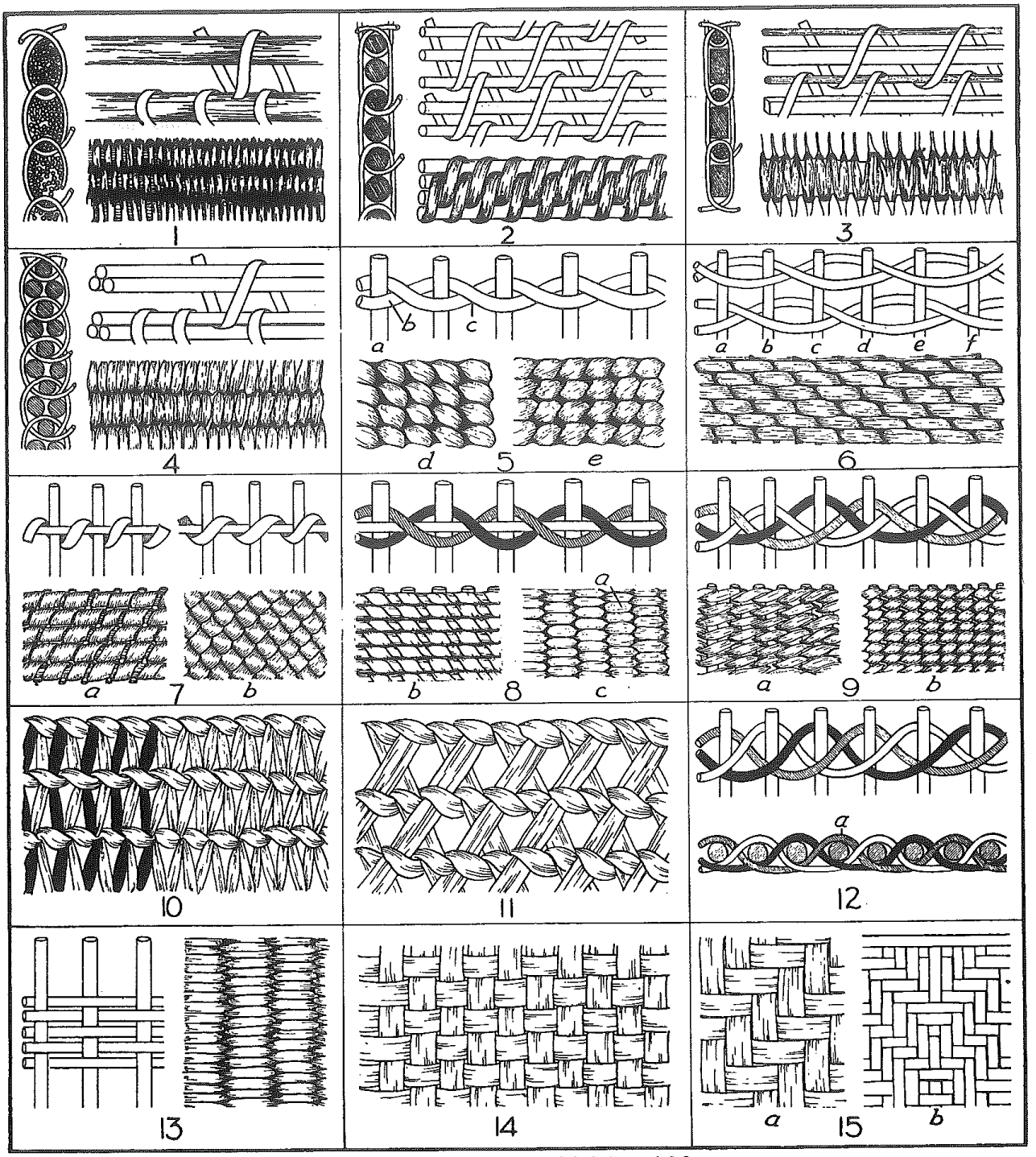

Adapted in part from Weltfish and Mason

BASKETRY CONSTRUCTION TECHNICS

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1. **BASKET-MAKING** is the process of forming vessels or mats by intertwining relatively coarse vegetal fibres. It is closely allied to weaving, which differs from it chiefly in using very small flexible fibres, of animal origin with the exception of cotton, really a type of wool. Certain fabrics made of fine vegetal fibres lie on the border line between weaving and basket-making. Both of these basic crafts rest on the same mechanical process, the binding together of foundation elements, called warps, by filling elements called wefts or woofs.

2. **MAJOR TECHNICS.** Baskets are made in four chief technics, coiling, twining, wicker and plaiting, each with subdivisions. The differences between them lie in the way warp and weft are combined. In coiling a vertical weft is wrapped around an horizontal warp; in twining and wicker the warps are vertical and the wefts horizontal; and in plaiting warps and wefts are indistinguishable, being of equal weight and performing the same functions. This leaflet attempts to explain how these technics work and to list the more common variations of each. Only fine basketry is considered. Space does not permit discussion of such points as direction of coiling or courses of weft, location of finished surface, details of stitching, rim finish, etc. For the distribution of these types and other details about basketry, see Leaflet 58. Page 263 of reference 3 lists many more technical variations. Twining and wicker are often combined in the term weaving.

3. **NOTES ON THE DRAWINGS.** 1, 2, 3, and 4 show cross sections of coils, an opened up section to show construction, and a section of finished work. 5 shows the construction and two types of finished work. 6 shows the construction and a finished section. 7 shows the construction as seen from interior and exterior, and finished sections of the two faces. 8 shows the construction and finished inner and outer faces. 9 shows the construction and finished inner and outer faces of 9 and 12. 10 shows a finished surface with one warp darkened to show the zigzag. 11 shows a finished surface. 12 shows the construction and a cross section of 9. 13 shows the construction and a finished section. 14 shows a finished section. 15 shows finished sections of two types.

COILING

4. **TECHNIC.** A basket made in this technic has a continuous coil which starts at the center of the bottom and rises to the rim. This coil has a core or foundation, the warp. The weft is a single strand which wraps around the foundation and at the same time sews its successive coils to each other. For details of making a coiled basket, see Leaflet 5.

5. **FOUNDATION TYPES** are three, each with several variations. They are multiple or bundle, rod or slat, and combinations of the first two.

6. **BUNDLE.** In this type (1) the foundation or warp is a mass of more or less round small grass stems, or of flat sections made by splitting large leaves, stems, twigs or roots. These flat sections are called splints or welts. Coils of this type tend to be oval and flexible, though if the bundle is large, as in 2nd Mesa Hopi, the coil is round. Examples of grass bundles are: 2nd mesa Hopi, Yokuts and Mission; of splint bundles, Pima and Thompson River.

7. **BUNDLE AND ROD.** In this type a single rod is set in the center of the bundle to give the foundation more stiffness. Panamint basketry is an example.

8. **RODS, VERTICAL.** Baskets with this coil (2) have walls made up of single rods set one above the other. The rods enclosed in each coil are from one to three. In other words, the stitches pass between every rod, or between every group of two or three. One rod is used much more than the other combinations. The coils of all but the one rod type are flat and broad. Each coil is slightly flexible vertically in the broader varieties. That is, the rods slip on each other if each is simultaneously pushed in opposite directions. Examples are: one rod, Pomo and Washo; two rod, Tinne (2); three rod, Mescalero Apache.

Quite broad single wooden slats are sometimes used. They appear in the coils on Mescalero Apache baskets and in the bottoms of those from the British Columbia Salish tribes.

9. RODS, BUNCHED. Here three or five rods are placed in a group instead of one above the other (4). This makes a round stiff coil and a very solid basket, possibly the most solid and long wearing of all. The three rod triangular type (4) is very widespread, while that with five rods is restricted to the Jicarilla Apache. Examples of three rod are: Western Apache, Maidu, Pomo and Chemehuevi.

10. COMBINATIONS of grass or splint bundles with rods or angular slats are quite common. Some of these combinations are: one or two rods and a bundle arranged vertically, used by the Yuki and in Plains gambling baskets respectively; slat with a splint or bundle, Lillooet (3); two rods and a bundle in a triangular arrangement, Navaho. In any large basket collection there will be found various other combinations carried out consistently in any given specimen and occasional irregular mixtures with several types of foundation in one basket.

TWINING

11. TECHNIC. Twined basketry resembles cloth in having vertical warps (5-a) bound together with horizontal wefts (5-b). In cloth, warp and weft are of equal size and equally flexible, but in twined baskets the warp is usually somewhat stiffer and larger than the wefts. Hence this style of basketry shows vertical corrugations (8-a), the presence of which is the chief indication of twined work. A less easily seen but essential characteristic of twining is the crossing of wefts between warps (5-c). The variations in this technic lie in the ways this crossing of wefts is accomplished. Twined stitches slant up to either right (5-e) or left (5-d). If the worker twists the wefts towards herself the slant is up to the left, and if away from herself, up to the right.

To make a twined basket a number of warps are laid out like spokes of a wheel and bound at the crossing. These ribs or spokes are fastened together by a pair of wefts which moves in a continuous spiral from the central hub to the ends of the ribs, the members crossing each other between warps.

12. PLAIN. The two wefts cross each other between warps in a half twist (5). Each weft is alternately on the inside and the outside of the basket. The weft which is above its partner between one pair of warps is underneath it between the next pair. Examples are Tlinkit, Pomo and the Hupa-Karok-Yurok group.

13. OPENWORK. The weft courses in twining are sometimes separated so that the warps are visible. The warps are arranged in three ways; parallel, crossed (11) and zigzag (10). Where the warps are parallel, the wefts are in plain twine. In the other two types, each course of wefts moves forward one warp, producing twilled or diagonal twining.

14. TWILLED OR DIAGONAL. This type is difficult to describe so the drawing on the cover must be carefully noted (6). The warps are lettered a, b, c, d, e, f. The wefts clasp pairs of warps and move forward one warp on each circuit. So on the first course the wefts cross between e and f; on the second course between d and e; on the third course between c and d and so on. This constant moving over creates a groove moving diagonally upward across the line of weft courses. These diagonal grooves are very evident and make easy the identification of the technic. Examples are Pomo and Paiute.

15. WRAPPED. In this variation of twining (7) one weft is relatively stiff and the other very flexible. The stiff weft is laid along the inside of the warps at right angles to them. The flexible weft is wrapped around the crossings of warps and the stiff weft. These two elements are so closely set that the wrapping weft covers them both. This technic produces a basket which has on the outside diagonal rows of square stitches set cornerways (7-b) and horizontal rows of what looks like coiling on the inside (7-a). This basketry is quite flexible. Examples are Nootka, Makah and Chehalis.

16. LATTICE OR TEE. This is the most elaborate of the twined technics (8). It has stiff warps and three wefts, one stiff and two flexible. The stiff weft is laid outside the warps at right angles to them. The two flexible wefts are crossed with a half twist around the junc-

tions or the warps and the stiff weft. The completed basket resembles plain twining on the inside (8-c) and coiling on the outside (8-b). The stitches on the twined inner surface are horizontal. The stitches on the coiled surface show a characteristic wide spacing. The stiff weft is sometimes omitted on the last few courses, which thus show plain twining on both sides. The finished products of wrapped and lattice twining look superficially alike. But the lattice-work lacks the square outer stitches and the flexibility of the wrapped work; and the horizontal rows are outside on lattice-work and inside on wrapped work. Lattice twining is done only by the Pomo.

17. 3-STRAND TWINE AND 3-STRAND BRAID. These technics are used at the start of twined baskets and to make decorative bands. Whole baskets are rarely made in these technics. In both, 3 wefts are used. Each weft passes over 2 warps and under 1. In the twined type (12) each weft is always on one side of the other two. In the braided type (9) each weft is always between the other two. Both look like plain twine on the inside of the basket (9-b) and resemble a twisted cord on the outside (9-a). In both technics one weft is inside and two are outside (12-a). The technics cannot be told apart when in place. Examples are: 3-strand twine, Havasupai; 3-strand braid, Pomo.

18. WICKER. In this technic (13) there are stiff warps and one stiff weft. The basketry is made as in plain twining except that one weft is used at a time instead of two. This weft passes alternately over and under successive warps until a full course is completed. The next course rests upon the first one, but goes over those warps under which its predecessor passed, and vice versa. There is a superficial resemblance to twined work, but wicker may be distinguished by the horizontal position of the stitches on both faces of the basket. The technic is rare in fine Indian basketry, though quite common in coarse work. Fine wicker work is limited to the 3rd mesa Hopi, some eastern Canadian tribes and the Cherokee.

19. PLAITING OR CHECKERWORK. In this technic flat strips are passed over and under each other, both being of equal size. There are no warps and wefts as such, that is, neither member can be definitely designated as either foundation or filler. Plain plaiting is made by passing the elements over one under one (14). When they pass in any other combination, such as over and under two, over one under two, or over one under three, diagonal or twilled plaiting is the result (15-a). Quite elaborate designs can be made by changing the combinations as the work progresses. (15-b). The technic is chiefly used in mat making, though some baskets are made by it. Examples of mat making are from the Haida and some Great Lakes tribes, and of basketry from the Nootka. New England plaited baskets border on wicker because splints vary in size and approach the character of warps and wefts.

Compiled from the following sources by F. H. Douglas:

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