

LOCOMOBILE WRINKLES.

One of the artists of the SCIENTIFIC AMERICAN recently purchased a locomobile, and as the result of three or four months' experience in night riding, he has devised a few "wrinkles" which are here-with illustrated for the benefit of our readers.

It is absolutely necessary for the driver to keep a close watch upon the water-glass, for although the fall of the water below the proper level does not by any means involve the destruction of the sturdy little boiler used on these machines, it certainly does not lengthen its term of life. The water-glass is located at the side of the driver and to avoid the necessity of his bending over to look at it, the builders place a small mirror on the dashboard, in which the glass is reflected. While the image is clear by day, it is apt to be a little vague at night, and it occurred to our artist that by the use of a powerful, concave mirror, placed in front of and just above the carriage lamp, a strong ray of light would be thrown upon the water-glass and a brighter image reflected on the dashboard mirror. He used a 2½-inch concave mirror, which was attached to the lamp, in the position shown in the accompanying engraving; the result has been very satisfactory.

It is equally important that the driver should be able to read clearly at night both the steam and naphtha gages, which are carried on either side of the footboard. To render the gages more conspicuous, the white enamel face and black pointer were removed and a black face with white figures and a white pointer, made very much broader and heavier than usual, were substituted. At the same time the carriage lamps were extended laterally from the car to allow their rays to fall more fully upon the gages. The quick reading of the gages was further facilitated by making the pointers with a short steel tail, the balancing of the pointer being secured by weighting the tail with a drop of solder. These changes, like the introduction of the mirror, have proved very successful, and the driver can now watch the water level, the steam pressure, and the pressure in the naphtha tank, without his attention being diverted from his look-out duties as driver.

spect it resembles wicker work. The weft or filling may be with grass, split stems, or split roots; though, in coarser examples, vines and stems with the bark on are often used.

4. Lattice twined weaving, tee, or Hudson stitch.
5. Three-ply twined weaving.

In every one of these, except number 5, the wefts make a half turn or twine at each space between the warps, as may be seen on modern waste-paper baskets. This twined weaving has had a wide distribution in time and space. At present it is found among the Aleuts, the Alaskan Eskimo, and the Pacific slope tribes down to the Pueblo country, where it suddenly ceases and is seen no more in America. The ancient mound-builders practice it and so did the Lake Dwellers of Switzerland. Some of the African negro tribes also make twined basketry. To each one of the types named a fascinating variety is given by changing the form and administration of the warps; by using stems, splints, filaments or straws for the weft; by varying the distances in warp and weft, by using different colored woods or dyed materials, and by a sort of overlaying or embroidery, which consists in wrapping the warp elements on the outside with colored straws. Shell beads and other pretty materials are also sewed on the surface. The pictures in the text will make plain the five styles of twining. Figs. 1 and 2 are of a Pomo basket received at the National Museum some years ago from Dr. J. W. Hudson, of Ukiah, California.

The ornamentation on the surface, it is said, represents a trail through the mountains. Several types of twining co-exist on this specimen.

PLAIN TWINED WEAVING.—Figs. 3 and 4, in the two rows at the top, show plain twined weaving as it appears both on the inside and the outside. The next three rows are practically the same, only the interstices enclose two warps instead of one, producing an ornamental band. Inside and outside are alike, as in all plain twined ware. Excellent examples of this are the Aleutian wallets, made of wild rye; Haida hats, of spruce root, and many Pomo examples of willow, carex roots, and circes stems.

DIAGONAL TWINED WEAVING.—This type is produced by carrying the wefts over two warps or more, and on the next round alternating the warp enclosed. The technique is shown on the lower half of Fig. 3 for the outside, and on the lower right hand corner of Fig. 4 for the inside. Enlarged illustrations of this twining appear on the left hand side of Fig. 5 and the right hand side of Fig. 6. Good examples of this are to be seen on Haida and Thlinkit basketry, on basket bottles of the desert region of the West, but it blooms out in the Pomo ware, under the name of chuset.

WRAPPED TWINED WEAVING.—I have elsewhere given this the title bird-cage twine, because, as in old fashioned wire cages, the warp forms a lattice work with one of the wefts laid horizontally across the inside, making rectangular interstices, and the other warp is wrapped about the intersections. The technique is well explained by figures 4, 5 and 6. This type of twined weaving is not widespread, being confined on the Pacific Coast between the 30th and 50th parallel. It is seen in Makah, Quinault and Chehatis baskets, in Wasco Sally bags, and, in all its glory, in Hudson's Pomo, under the name of lit. It lends itself most kindly to difficult patterns.

TEE TWINED WEAVING.—This style of twined basketry is confined to the Pomo, of Russian River, California, and should be named after the discoverer of the Hudson type. There are, in fact, two warps and two wefts. The warp consists of vertical stems, as in plain twine, overlaid on the outside by a horizontal stem forming square interstices.



ILLUMINATING THE WATER-GLASS AND PRESSURE-GAGES OF THE LOCOMOBILE.

The weft elements are commonly administered in pairs, though in three-ply twining and in braid twining the three weft elements are employed. According to the relation of these weft elements to each other and to the warp, different types of structures result, which may be named as follows:

1. Plain twined weaving.
2. Diagonal twined weaving, or twill.
3. Wrapped twined weaving.

TYPES OF AMERICAN INDIAN BASKETRY.

BY OTIS T. MASON, CURATOR OF THE DIVISION OF ETHNOLOGY IN THE UNITED STATES NATIONAL MUSEUM.

At last, after an almost fatal neglect, patrons of savage American fine art are beginning to appreciate Indian basketwork. It is the only aboriginal art that has not been counterfeited; at the same time, it is more ideal than pottery, since form, technique, and intricate patterns must all be fixed in the imagination before the maker takes the first step.

TWINED BASKETRY.—In this paper attention will be confined to a single class or genus of basket technique, which I have elsewhere called "twined basketry" (Smithsonian Rep., 1883-1884, pt. II., 291.306). There are two genera of basketry:

1. Hand plaited, or woven, on straight foundation.
2. Sewed or wrapped, on coiled foundation.

Woven basketry is in (1) checker, as in the bottoms of common splint baskets of rectangular outline; (2) diagonal, or twilled, as in matting, all about the Gulf of Mexico, and in South America; (3) wickerwork, as in the Algonquian and Iroquoian ware; and (4) twined, or wattled, as will be now explained. Twined basketry has a warp of shoots, prepared stems (called osiers, or splints, arranged radially at the bottom and in more or less parallel fashion on the body. In this re-



Fig. 2.—Bottom of Basket.

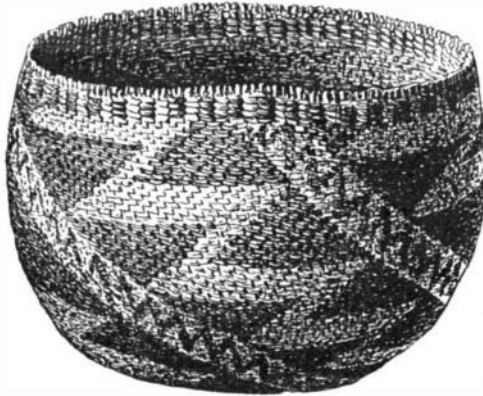


Fig. 1.—Pomo Indian Basket, Russian River, Cal.

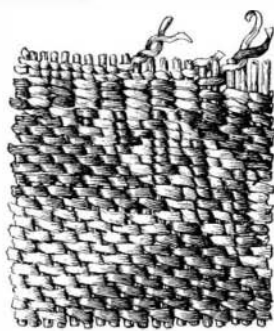


Fig. 3.—Texture of Pomo Indian Basket.

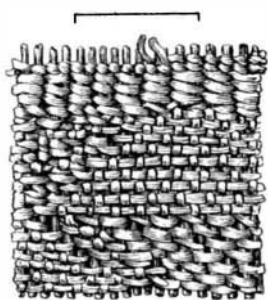


Fig. 4.—Inside Technique.

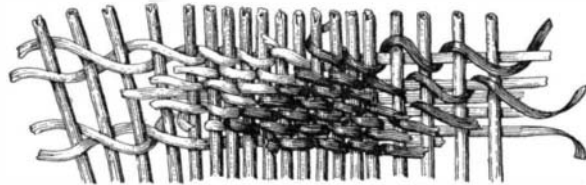


Fig. 5.—Outside Technique and Lit Twine.

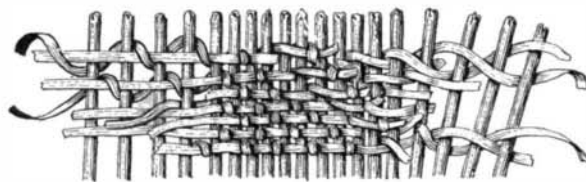


Fig. 6.—Inside View of Diagonal and Lit Twine.

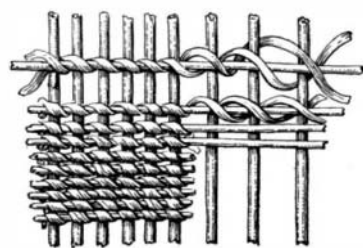


Fig. 7.—Outside View of the Pomo Tee or Hudson Stitch.

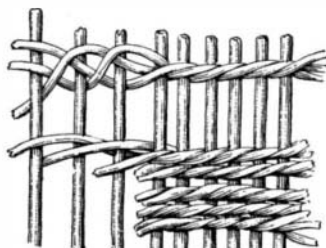


Fig. 8.—Outside View of Three-Ply Twined Weaving.

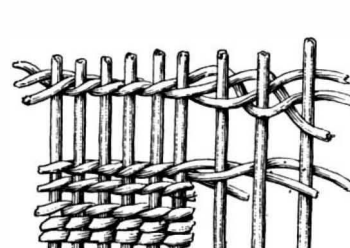


Fig. 9.—Inside View of Three-Ply Twined Weaving.

TYPES OF AMERICAN INDIAN BASKETRY.