SCIENCE.—SUPPLEMENT.

FRIDAY, JUNE 24, 1887.

INDIAN CRADLES AND HEAD-FLATTENING.

I AM indebted to Dr. R. W. Shufeldt and Dr. Washington Matthews, both of the U. S. army, for the suggestion that a more intimate study of Indian cradles is demanded by those who are investigating the subject of cranial deformation.

In studying this subject, it is well to bear in mind the fact that among the Eskimos and Indians of the far north, as well as among the Indians of the tropics, cradle boards or frames are impracticable. In the former region the cold is too intense; in the latter, clothing of any kind is unnecessary. The student must remember, also, that the use of cradles extends over the first year of a child's life, beginning when it is absolutely helpless, and ending with the time when the child can stand alone in its cradle, and finally walk out of it. In all these cases, functionally if not structurally, the cradle is modified in harmony with its occupant. It must be remembered, also, that culture-gradus, natural supplies, and the appliances and decorations of each tribe, have an effect on the cradle. Properly speaking, cradles are divided structurally into quasi genera and species: they are intimately related to their environment, they have their ontogeny and phylogeny, and they are formed and fashioned in co-ordination with the whole industrial life of their respective tribes.

The parts of a cradle are, 1°, the frame; 2°, the bed; 3°, the pillow; 4°, the wrappings and lashings; 5°, the carrying appliances; 6°, the decoration.

The young Eskimo, when it goes abroad, finds its carriage in its mother's hood. This custom is universal from Labrador to Mount St. Elias, and the maternal *parka* is made capacious accordingly.

The Tinné stock of the Yukon River make their tray-shaped cradle of birch-bark, with hood and awning of the same material. No attempt is made at a permanent bed or pillow. The child in its wrappings is laid in the cradle, and lashed securely.

The national museum does not possess an Indian cradle from the Haida or Tlingit Indians. The Bella Bella Indians of British Columbia make a little ark of cedar-wood, with head-board sloping upward. The bed is an abundance of finely shredded cedar-bark. The child is laid in this soft couch, wrapped with flaps of buckskin, and lashed in with a leather string. Totemic devices are painted on the head-board.

Coming southward, we encounter the Chinook cradle, a trough of cedar-wood, carved to imitate a scow-boat. The bed is soft bast or cedar-bark. The remarkable feature is the pad drawn down upon the forehead Compare this with the awning of the Yukon cradle. Query: Did many Indian cradles formerly have a device to keep the heads of very small children from falling down while the cradle was in a vertical position, and did most tribes abandon it because it affected the shape of the child's head, while the Chinook retained it for the same reason? In scientific phrase, is this a case of survival or atavism?

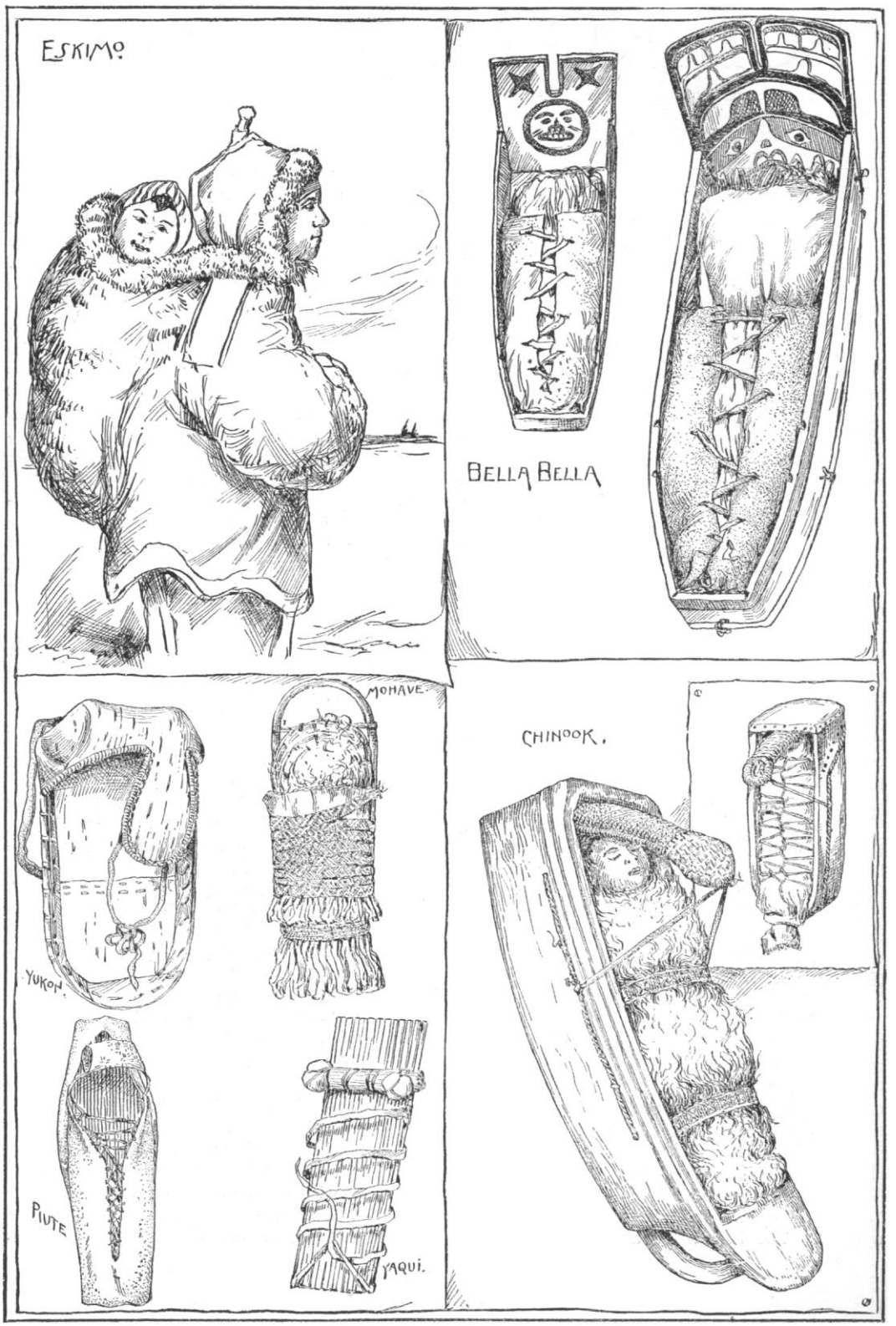
The Hupas and all other Oregonian and northern Californian tribes weave their cradle-baskets and wallets from twigs or from the tough fibre of the milk-weed. In shape, the frame resembles an open slipper, and a pretty dish-shaped awning covers the face.

In southern California the Mohave and other members of the Yuma stock make a ladder or trellis, on which is laid a bed of shredded willow or mezquite bark. A blanket of the same material is spread over the baby, held in place, not by the almost universal lacing, but by a garter-shaped band wrapped round and round 'cradle and baby and all.' This band, in the specimen figured, is braided, not woven, of party-colored threads, the figures suggesting similar ornaments on pottery.

The Yaqui Indians of Sonora make their cradles of reed-canes, held in a plane by rude dowels piercing them transversely in several places. A bundle of split cane forms the pillow, and two little pads or bosses of rags keep the child's head from rolling off laterally. Yaqui crania should be carefully examined for occipital deformation.

The Piutes represent the great Shoshone stock of the interior basin. Their cradle is a rack of twigs, like that of the Yaqui. It is enclosed in a capsule of buckskin, has an awning over the head, and the bed is made of skins. The child's head has no elevated pillow, but is brought in contact with the fur-covered cradle-frame.

The Navajo cradle-board is the type followed by all the Pueblos and by the Apaches as well. A flat board, with awning, side-flaps, and elaborate lacing, forms the groundwork, which the gorgeous Navajo loads down with silver ornaments. Dr.


ESKIMO
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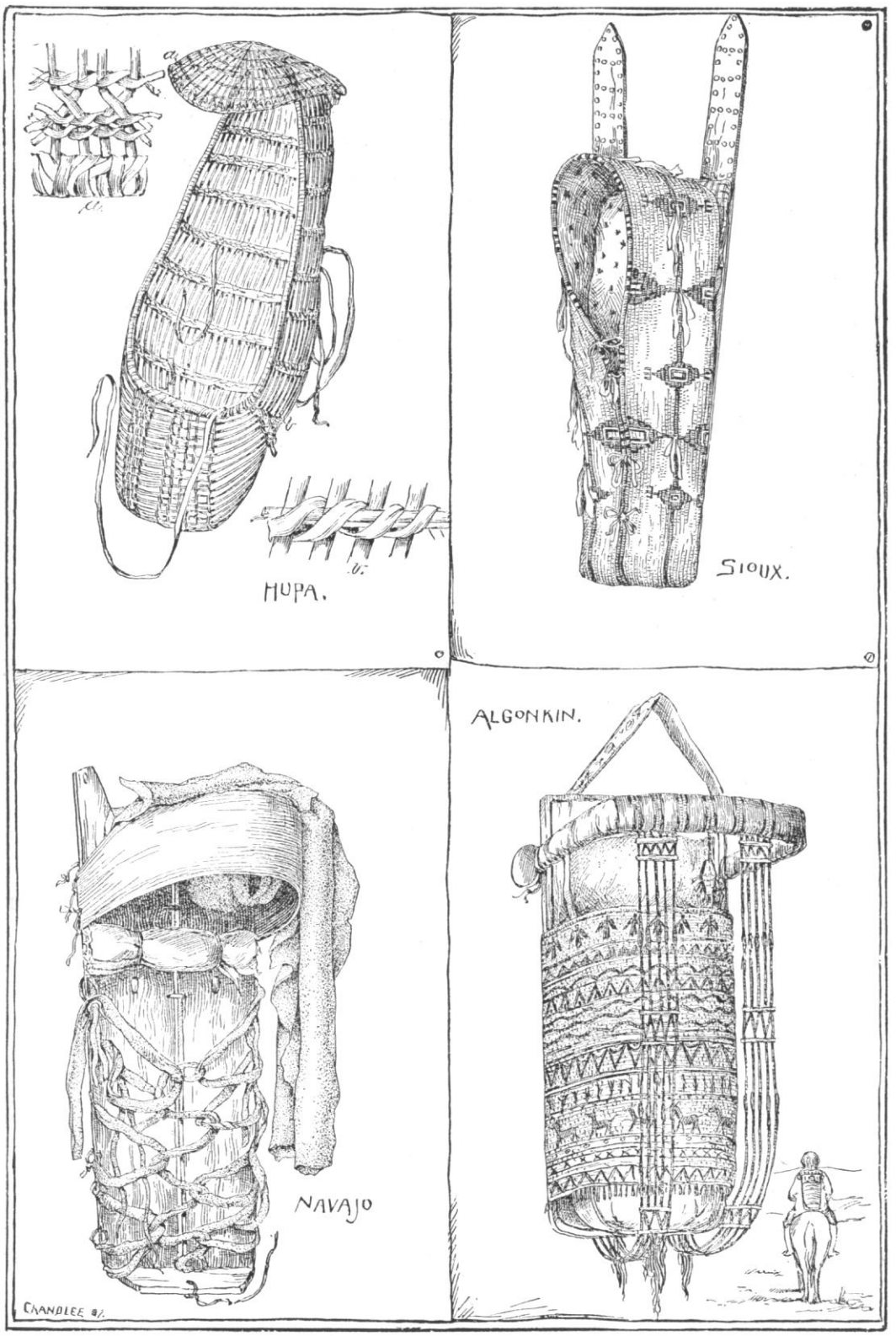
HUPA.
SIOUX.
NAVAJO
ALGONKIN.
CHANDLEE

Shufeldt and Dr. Matthews have both studied this cradle carefully with reference to deformation.

The Sioux cradle represents those of all the tribes on the plains of the great west. It is a trellis or rack of four pieces, like a skid or a flower-frame, or a frame on which fur skins are stretched. Two upright pieces nearly contiguous at the foot are spread apart at the top. They are held in place by cross-slats above and below. A strip of buffalo-skin, fur side up, covers this frame. The child lies on this in a sort of hammock between the vertical slats. There is an ample pillow. The enclosing portion is shoe-shaped, made of leather, and strengthened around the face by stiff hide. The child is lashed in by the closing of these leather flaps, which are now for the most part gorgeously adorned with bead-work.

The Algonquin cradle is, like that of the Navajo, a board with stationary padded pillow, ample bed, and cover ornamented with porcupine-quills.

There are no cradles in the national museum from the southern Indians. The squaws that frequent southern cities at present carry their children in shawls or sacks on their backs.

No attempt is here made to touch the literature of the subject, which generally introduces more confusion than knowledge. O. T. MASON.

DR. BAIN ON ULTIMATE QUESTIONS OF PHILOSOPHY.

PROF. ALEXANDER BAIN of Aberdeen is universally regarded as the greatest exponent of the association school of psychology, and for this reason his scattered papers and addresses are carefully read by philosophical students. At the last meeting of the Aristotelian society, he read a paper on the 'Ultimate questions of philosophy,' which is reported as dealing with the philosophical differences of opinion that grow out of the attempts to give reasons for what has to be assumed as being ultimate. At the outset the author illustrated the position that a science may be very debatable in its foundations, and yet the superstructure raised upon these may be sound and unimpeachable. This is most apparent in the mathematical and physical sciences, in several of which the ultimate axioms are given in questionable forms, without impeding the development of truthful doctrines, both inductive and deductive. Less obvious is the application to logic and psychology, which, in the opinion of some, are in a state of total arrest until the fundamentals are thoroughly adjusted. Yet this extreme position may be overstated; for in these sciences many important results have been obtained, while controversy still rages in regard to the primary truths of both. In following out the main design of the paper to deal with ultimate questions, the two foundation axioms of logic, namely, the axiom of self-consistency and the axiom of nature's uniformity, were first considered, the chief stress of the discussion being laid on the second. The absolutely ultimate character of the belief that the future will resemble the past was contrasted with the three other views of the axiom: namely, 1°, that it is an identical proposition (as maintained by Taine and Lewes); 2°, that it is an intuition; 3°, that it is a result of experience. As to the last view, which is the empirical doctrine, the author contended that experience could not assure us of what has not yet happened without making the assumption that the future will be as the past has been, that is, without begging the matter in dispute. The axiom is not properly described either by experience or by faith, and should be treated as unique, and should receive an unmeaning name, that compares it to nothing else. Considering that probably the earliest explicit statement of the axiom is that given in Newton's third rule of philosophizing, there would be no impropriety, but very much the reverse, in this bicentenary year of the 'Principia,' in baptizing it the 'Dictum of Newton.' The author then reviewed the several questions that might be regarded as ultimate in ethics, dwelling especially upon the proper view of disinterested action, which could not be obligatory without ceasing to be disinterested. Finally a search was made in psychology for the best examples of questions of the ultimate class.

ASYMMETRY.

DR. T. G. MORTON of Philadelphia has recently called attention, in the *Medical times* of that city, to the effects of unequal length of the lower limbs in producing lateral spinal curvature. Asymmetry of this kind has been known for some years, but it does not appear that it has been regarded as a cause of ailment in other parts of the body. Dr. Morton finds that it leads to backache of distressing severity, and also that it can be cured by adding to the shoe-heel of the short leg. The following is abstracted from his accounts of several cases: a young man, aged twenty-five, had been troubled for over a year with severe and continued backache, extending to the right side. When attempting to straighten up his back, he experienced a cramp-like feeling. It was found that his right leg was one and five-eighths inches shorter than the left, and that the right arm and leg were smaller than the left. The unsymmetrical form of the body was very apparent in a