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Obtained from the Indians of New Mexico in 1880, by James Stevenson

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SMITHSONIAN INSTITUTION--BUREAU OF ETHNOLOGY.

ILLUSTRATED CATALOGUE
OF THE
COLLECTIONS OBTAINED FROM THE INDIANS
OF
NEW MEXICO IN 1880.

BY

JAMES STEVENSON.

* * * * *

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[Illustration:

MAP OF THE PROVINCE OF TUSAYAN, ARIZONA
Surveyed by A. L. WEBSTER 1881]

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* * * * *

INTRODUCTION.

It is thought best that I should give, in connection with the catalogue of collections made by the party under my charge in 1880-'81, a brief statement in relation to the collections described in the catalogues, and the information obtained in regard to the Pueblo tribes.

Our explorations during the field season of 1880 and 1881 were restricted to the Pueblo tribes located along the Rio Grande and its tributaries in New Mexico. The chief object in view was to secure as soon as possible all the ethnological and archaeological data obtainable before it should be lost to science by the influx of civilized population which is being rapidly thrown into this region by the extension of railroads into and through it. Not only are the architectural remains being rapidly destroyed and archaeological specimens collected and carried away by travelers, excursionists, and curiosity hunters, but the ancient habits and customs of these tribes are rapidly giving way and falling into disuse before the influence of eastern civilization.

Our party, consisting, besides myself, of Mr. Galbraith, archaeologist, Mr. Morancy, assistant, and Mr. J. K. Hillers, photographer, proceeded to Santa Fe, N. Mex., where an outfit was secured for the season's work. From here we proceeded to Taos, one of the most extensive pueblos in the Rio Grande region. This village is situated on the Rio Taos a few miles from the Rio Grande, and just under the shadow of the Taos Mountains. It

comprises two large sections, one on each side of the Rio Taos. These are compactly built and each six stories high. The industrial pursuits of these Indians are principally pastoral and agricultural, they having a good market for their products in the Mexican village of Fernandez de Taos, containing a population of about 4,000 Mexicans and eastern people.

The party spent several days here making investigations and collections. The collection made was small but quite varied and novel, though few of the articles obtained were of their own manufacture.

Quite a number of stone implements were secured, among which were some stone knives, pipes, a number of rude stone axes and hammers, arrow smoothers, &c. The pottery obtained here is chiefly of the common type and resembles that from San Juan, from whence in all probability it was received by exchange and barter. Earthenware, so far as I can learn, is not now made in Taos, except by a few families where a Taos Indian has married a woman from San Juan or some other tribe where the manufacture of pottery is carried on. If this industry was ever, practiced by the Taos Indians it must have been at a remote period; in fact there seems to be no tradition of it now among them.

From here we went next to the pueblo of San Juan, situated on the left bank of the Rio Grande, about 50 miles south of Taos. At this pueblo a collection was made of stone implements, articles of clay, &c. These specimens are not quite so representative as those from some of the more southern pueblos, the village being situated on one of the military wagon roads, over which many Europeans pass, and hence frequently visited; many of the most valuable specimens of implements and pottery have been bartered away; however, those we obtained display quite fully all the industries of the people of this pueblo. This collection consists of a number of fine stone mortars, pestles, arrow and spear heads, also several polishing stones. Quite a number of small animal forms carved out of stone were also secured. At this pueblo many specimens of the black polished ware peculiar to a few of the tribes in the Rio Grande Valley were collected.

From San Juan we proceeded to Santa Clara, situated a few miles below on the right bank of the Rio Grande. This pueblo proved to be so interesting in its surroundings that some time was spent here in making investigations. We found the people extensively engaged in the manufacture of that black polished pottery of which so little has been known heretofore, especially in regard to the process of baking and coloring it, which is fully described in the text accompanying the catalogue of last year in this volume. The larger portion of the specimens of earthenware obtained here was of this kind, though several specimens of the red and some few of the ornamented class were also secured.

Most of the pottery manufactured at this village is the black polished

ware. That of the decorated class is ornamented with the juice of *Cleome integrifolia*, which is fixed in the ware in the process of burning. Mineral substances, so far as I could learn, are not used by the Indians of Santa Clara in decorating their pottery.

Among the specimens are a number of interesting stone implements, nearly all of an older kind than any made by this people at the present day.

During our stay at this pueblo some interesting archaeological discoveries were made of which a brief mention in this connection may not be out of place, and which will certainly prove of great interest to future investigators. Between the Rio Grande and Valle Mountains, commencing about 12 miles below, or south, of Santa Clara, and extending south, to within ten miles of Cochiti, a distance of about 65 miles, is an extensive area, the intermediate elevated portion of which is composed of a yellowish volcanic tufa, of coarse texture and sufficiently soft and yielding to be readily worked or carved with rude stone implements. Over this entire area there are irregular elevations, somewhat circular in outline, from 50 to 200 feet in height, the faces of which have been worn away by the elements, and are in nearly all instances perpendicular. These consecutive elevations extend back from the Rio Grande from five to fifteen miles. Over this whole expanse of country, in the faces of these cliffs, we found an immense number of cavate dwellings, cut out by the hand of man. We made no attempt to count the number of these curious dwellings, dug like hermit cells out of the rock, but they may be estimated with safety among the thousands. I made many inquiries of the neighboring tribes in regard to the history of these dwellings, but could elicit no information from any of them. The response was invariably, "they are very old and the people who occupied them are gone."

An inspection of a portion of this area revealed a condition of things which I have no doubt prevails throughout. The dwellings were found in the faces of the cliffs, about 20 feet apart in many instances, but the distances are irregular. A careful examination satisfied me that they were excavated with rude stone implements resembling adzes, numbers of which were found here, and which were probably used by fastening one end to a handle.

The doorways, which are square, were first cut into the face of the wall to a depth of about one foot, and then the work of enlarging the room began. The interiors of the rooms are oval in shape, about 12 feet in diameter, and only of sufficient height to enable one to stand upright.

The process, from the evidences shown inside, of carving out the interior of the dwelling was by scraping grooves several inches deep and apart, and breaking out the intermediate portion; in this way the work progressed until the room reached the desired size. Inside of these rooms were found many little niches and excavated recesses used for storing household ornaments, the larger ones probably supplying the

place of cupboards. Near the roofs of many of the caves are mortises, projecting from which, in many instances, were found the decayed ends of wooden beams or sleepers, which were probably used, as they are now in the modern Pueblo dwellings, as poles over which to hang blankets and clothing, or to dry meat. These dwellings were without fireplaces; but the evidences of fire were plainly visible at the side of each cave, and in none of those visited did we find any orifice for the egress of the smoke but the small doorway. On the outside or in front of these singular habitations are rows of holes mortised into the face of the cliffs about the doors. It is quite evident that these were for the insertion of beams of wood (for forming booths or shelters in the front), as ends of beams were found sticking there, which, in their sheltered position and in this dry climate, may have been preserved for centuries.

Upon the top of the mesa of which these cliffs are the exposed sides we found the ruins of large circular buildings made of square stones 8 by 12 inches in size. The walls of some of these structures remain standing to the height of ten or twelve feet, and show that from four to five hundred people can find room within each inclosure. One of these buildings was rectangular and two were round structures. The latter were about 100 and 150 feet in diameter, the rectangular one about 300 feet square. Many small square rooms were constructed in the interior from large cut bricks of the tufa of which the bluffs are composed. These rooms all opened toward the center of the large inclosure, which has but one general doorway. From these ruins we secured great quantities of pottery, arrow and spear heads, knives, grinding-stones, arrow-smoothers, and many of the small flint adzes, which were undoubtedly used for making the blocks for the structures on the mesa and for excavating the cave dwellings. Among the debris in the dwellings are found corncobs and other evidences of the food used by the inhabitants. This certainly indicates that the people who occupied these singular dwellings were agricultural.

The faces of some of the more prominent cliffs contained as many as three rows of chambers one above the other; the debris at the foot, sometimes 200 feet deep, covered up at least two rows of these chambers.

Along the edges of the cliffs and over the rocky surface of the mesa are winding footpaths from 3 to 10 inches deep, worn by the feet of the inhabitants. Some of these paths showed perceptible foot-prints where it was inconvenient for those following the path to do otherwise than tread in the footsteps of their predecessors.

In our limited investigations we were unable to discover any evidence of burial customs. No graves could be found, and nothing of human remains.

The southern portion of this area seems to have been most densely populated. Some of the protected walls in the neighborhood retain hieroglyphics in abundance. These resemble the picture writing of the

present Indians of that region. Many interesting specimens of the art of this ancient people can be seen in the images of wild animals scattered over various spots. Many of them are cut in full relief out of the tufa and are always in some natural attitude, and can always be identified where the weather has not destroyed the original form. The most prominent are two mountain lions, side by side and life size.

Further examinations will reveal much more of value and interest in connection with this very inviting locality.

Mr. Galbraith, who accompanied my party, spent some time examining this region and made collections here.

The next pueblo visited was San Ildefonso, about five miles below Santa Clara, on the opposite bank of the Rio Grande. But few specimens were obtained here. The people of this pueblo devote their time chiefly to agricultural and pastoral pursuits, and have almost abandoned the manufacture of pottery, that in use by them at the present time being mostly obtained from neighboring tribes.

From San Ildefonso we proceeded to Nambe, a pueblo which has become almost extinct. The remnant of this people is situated about 25 miles above Ildefonso, on Nambe Creek, and not far from the base of the mountains. The people of Nambe have several times in years past moved their pueblo higher up the stream, the valley of which furnishes them fine agricultural and grazing grounds. They make very little pottery, but we found stored in many of the houses of the village great quantities of stone implements, principally large metates and grinding-stones. We also found many specimens of interest among the ruins of old Nambe and Pojuaque, as well as the remains of pottery in such quantities as to show that in the past the manufacture of pottery had been carried on quite extensively. In this vicinity I made arrangements with one of the employes of the party, who had resided many years at Santa Fe, to make excavations and collections from the old sites of Nambe, Pojuaque, and Cuyamunque, in which he was quite successful.

From the pueblos north of Santa Fe we traveled direct to Cochiti, 27 miles southwest of Santa Fe. This village is situated on the right bank of the Rio Grande and about three miles from Pena Blanca, a small Mexican town opposite. Here a very interesting collection was secured consisting mostly of pottery, many of the vessels simulating animal forms, variously ornamented with representations of some varieties of the flora of the locality. A few stone implements were also obtained here.

We next visited Jemez, situated on the Rio Jemez. From thence we went to Silla and Santa Ana. At each of these villages representative collections were made, all of which are referred to in detail in the catalogue.

The next villages visited were Santo Domingo and Sandia, on the Rio Grande. Some characteristic specimens were obtained at each of these pueblos. The method of their manufacture and the manner of using them are generally the same as in most of the other pueblos.

A small collection of rude stone hammers was obtained from the turquoise mine in the Cerrillo Mountains, about 25 miles from Santa Fe.

The products of this celebrated mine, which were objects of traffic all over New Mexico, as well as contiguous countries, probably formed one inducement which led to the Spanish conquest of this region. The turquoises from this mine have always been valued as ornaments by the Indians of New Mexico, and carried far and wide for sale by them. The mine was worked in a most primitive manner with these rude stone hammers, a number of which were secured. The collections are all now in the National Museum for study and inspection.

The following sketch is introduced here to show the method of using the batten stick represented in Fig. 546. There is not a family among the Pueblos or Navajos that does not possess the necessary implements for weaving blankets, belts and garters. Figs. 500-502 will convey an idea of the variety in design and coloring which prevails in this class of Indian fabrics, while Fig. 710 represents a blanket weaver at work. The picture is taken from a photograph made on the spot by Mr. Hillers, and is colored in accordance with the actual colors of the yarns and threads used in its manufacture.

The particular class of blankets represented in this illustration is woven in the estufas, and is used almost exclusively in sacred dances and ceremonies of the tribe, all other garments being made in the houses or in the open air. The Navajos are celebrated for their skill as blanket weavers, and the Mokis are equally skilled in the manufacture of a finer class of the same article, which is much sought after by the surrounding tribes for ornamental purposes in sacred and other dances.

The vertical threads, as shown in the figure, are the warp threads; the coarser thread which is inserted transversely between these is the yarn or weft. The three rods in the center of the blanket are lease rods, which are introduced among the threads of the warp to separate them and thus facilitate the insertion of the weft thread. These rods are each passed in front of one warp thread and behind another, alternately, across the whole warp, and between each rod the threads are brought from the back of one to the front of the next, and *vice versa*. The bar held in hands of the weaver serves as a batten for driving or beating the weft thread into the angle formed by the crossed warp threads.

This loom resembles in principle the ancient Egyptian, Grecian, and French looms which are described on pages 55 to 62 of "The History and Principles of Weaving by Hand and Power," by A. Barlow, London, 1878,

and on pages 41 to 45 of the "Treatise on Weaving and Designing of Textile Fabrics," by Thomas E. Ashenhurst, Bradford, England, 1881. See also pp. 200 to 208, Vol. II, of the "Cotton Manufacture of Great Britain," by A. Ure, London, 1861.

COLLECTIONS FROM CUYAMUNQUE.

ARTICLES OF STONE.

RUBBING STONES.

(Used as rubbers in grinding corn on metates.)

1-3. 1, (46506); 2, (46507); 3, (46517). Basalt.

4, (46510). Sandstone.

5, (46512). Conglomerate.

6-9. 6, (46513); 7, (46514); 8, (46515); 9, (46516). Mica schist.

10-11. 10, (46518); 11, (46529). Of hornblende schist; these are elongate and intended to be used with both hands.

12-13. 12, (46508); 13, (46567). Quartzite metates.

14-15. 14, (46509); 15, (46511). Sandstone metates, the latter but little used and almost flat.

16, (46551). Rubbing stone of andesite.

17-24. 17, (46555); 18, (46556); 19, (46557); 20, (46558); 21, (46561); 22, (46563); 23, (46569); 24, (46559). Small smoothing stone mostly of quartzite, one or two only of basalt. These are boulders weighing from one to three pounds, rounded by natural agencies, and selected by the natives to be used for smoothing and polishing purposes. When much used they are worn down flat on one side, the side used being worn off, just as the rubbing stone in the old process of preparing paint.

25-26. 25, (46519); 26, (46520). Unfinished celts of basalt.

27, (46521). Crude hoe or adze of mica schist.

28, (46522). Schist stone with groove for smoothing arrow shaft, and hole for rounding point.

29-31. 29, (46523); 30, (46524); 31, (46525). Crude stone implements, supposed to be used for digging.

32-34. 32, (46526); 33, (46527); 34, (46528). Very crude stone implements, probably used for pounding.

35, (46530). Double-handled baking stone; basalt. The use of stones of this kind will be more particularly noticed hereafter.

36, (46531). Broken rounded mortar; basalt.

37, (47532). A small, oblong, mortar-shaped vessel of lava. The width three inches, length when unbroken was probably four and a half inches; width of inside two inches, length probably three and one-fourth inches, depth of cavity three-fourths of an inch. On the portion remaining there are four feet; originally there were doubtless six. On one side is a projection or handle similar in form and size to the feet. 38-54. 38, (46533); 39, (46534); 40, (46535); 41, (46536); 42, (46537); 43, (46538); 44, (46539); 45, (46550); 46, (46552); 47, (46553); 48, (46554); 49, (46560); 50, (46562); 51, (46565); 52, (46566); 53, (46568); 54, (47571). Pounding or hammer stones, some of them simple cobble stones, others with marks of slight preparation for use by chipping off or rubbing down prominences.

55, (46540). Sandstone with smoothed surface and groove for smoothing arrow shafts.

56-64. 56, (46541); 57, (46542); 58, (46543); 59, (46544); 60, (46545); 61, (46546); 62, (46547); 63, (46548); 64, (46564). Small stones, chiefly quartz, basalt, and agate, used for smoothing and polishing pottery.

65-68. 65, (46570); 66, (46572); 67, (46573); 68, (46574). Broken rubbers for metates.

69, (46988). Spear head. Basalt.

70, (46989). Arrow head. Obsidian.

ARTICLES OF CLAY.

(Only one perfect specimen obtained.)

71, (46575). A bowl.

72, (46718). Fragments of ancient pottery.

COLLECTIONS FROM NAMBE.

ARTICLES OF STONE.

73-78. 73, (46577); 74, (46578); 75, (46579); 76, (46580); 77, (46581); 78, (46583). Quartzite rubbing stones of an elongate form.

79, (46582). Similar to the last group, but appears to have been used as a pestle as well as a rubber.

80-85. 80, (46584); 81, (46585); 82, (49586); 83, (46587); 84, (46588); 85, (46589). Pounding stones, chiefly of quartzite. These are quite regularly formed, cylindrical or spindle-shaped, with blunt or squarely docked ends, from four to seven inches long and two to three inches in diameter, used chiefly in pounding mesquite beans.

86-89. 86, (46590); 87, (46591); 88, (46592); 89, (46593). Round, flattened, or disk-shaped quartzite pounders, medium and small sizes.

90-91. 90, (46596); and 91, (46597). Pounders similar to the preceding group, but smaller.

92, (46594). A flat or disk-shaped polishing stone of quartzite.

93, (46595). An oblong rectangular quartzite pounding stone.

94-105. 94, (46598); 95, (46599); 96, (46600); 97, (46601); 98, (46602); 99, (46603); 100, (46604); 101, (46605); 102, (46606); 103, (46607); 104, (46608); 105, (46609). Small irregular stones of jasper and basalt used in shaping and polishing pottery.

106, (46610). Elongate, well-worn, sandstone meal rubber or rubber for metate.

107, (46611). A stone bowl or basin made from an oblong, somewhat oval-shaped quartzite slab, and used for pounding and grinding mesquite beans. The length is 19 inches, greatest width 10 inches, depth of depression 2 inches.

108, (46612). Rather large disk-shaped smoothing stone of basalt.

109-114. 109, (46719); 110, (46720); 111, (46721); 112, (46722); 113, (46723); and 114, (46724). Rubbers for metates of the usual form, mostly of basalt, well worn, and most of them broken.

115-131. 115, (46725); 116, (46726); 117, (46728); 118, (46729); 119, (46732); 120, (46733); 121, (46734); 122, (46735); 123, (46739); 124, (46740); 125, (46741); 126, (46742); 127, (46743); 128, (46744); 129,

(46749); 130, (46750); 131, (46761). Crude pounding stones, mostly simple cobble stones, more or less worn by use.

132-150. 132, (46727); 133, (46730); 134, (46731); 135, (46736); 136, (46737); 137, (46738); 138, (46745); 139, (46746); 140, (46747); 141, (46748); 142, (46751); 143, (46752); 144, (46753); 145, (46754); 146, (46755); 147, (46756); 148, (46757); 149, (46758); 150, (46759). Small and mostly polished smoothing stones, used chiefly in polishing pottery; all well worn; of jasper, quartzite; or basalt.

151, (46760). A broken grooved ax of basalt.

152, (47051). A very large metate, twenty-four inches long and fifteen inches wide, much worn, the middle of the curve being three and one-half inches below the surface.

153, (47048). Ax with groove on one edge.

154, (47049). Hammer with broad annular groove.

155, (47050). Hammer with lateral notches.

156, (47051). Ax, broken.

157, (48052). Grooved hammer.

158, (47056). Half of a large mortar, much worn.

159, (47058). Metate.

160, (47059). A small mortar, probably used for grinding and pounding chili (pepper).

ARTICLES OF CLAY.

Articles of clay from this pueblo, which are but few in number, are either of polished black ware or unpolished of the natural *_tierra amarilla_* or yellow earth, color, but more or less blackened by use. This ware is of precisely the same character and quality as the black pottery from Santa Clara. The pitchers, cups, and basins are evidently modeled after introduced patterns from civilized nations. All are without ornamentation.

161, (47033). Tinaja or olla, with narrow neck; *_tierra amarilla_*, blackened.

162, (47032). Tinaja or olla, rather small, polished black ware.

163-164. 163, (47034); 164, (47035). Pitchers of the ordinary form with

handle and spout, about half-gallon size, polished black ware.

165, (47036). Small olla, yellow ware.

166, (47037). Small olla-shaped bowl; yellow ware.

167, (47038). A cup without handle.

168-171. 168, (47039); 169, (47040); 170, (47041); 171, (47042). Cups with handle similar in form and size to the ordinary white stone-china coffee cups; yellow-ware.

172, (47043). Cup similar in form and size to the preceding, but of polished black ware.

173, (47044). Small cup without handle; polished black ware.

174, (47045). Small cooking pot with handle; polished black ware.

175, (47046). A pear-shaped water vessel with two loop handles placed opposite each other near the mouth.

176, (47047). A large, polished black ware basin of the usual washbasin form, but with undulate border.

177, (47060). Small bowl, black polished ware.

COLLECTIONS FROM POJUAQUE.

ARTICLES OF STONE.

178-189. 178, (46613); 179, (46614); 180, (46615); 181, (46616); 182, (46617); 183, (46618); 184, (46619); 185, (46620); 186, (46621); 187, (46622); 188, (46657); 189, (46658). Hammers with groove around the middle. In 46618 the groove is double. They are of quartzite, lava, greenstone, metamorphic rock and basalt.

190-202. 190, (46623); 191, (46624); 192, (46625); 193, (46627); 194, (46639); 195, (46640); 196, (46641); 197, (46642); 198, (46644); 199, (45645); 200, (46646); 201, (46647); 202, (46648). Small smoothing-stones.

203, (46626). A triangular pounding stone.

204-212. 204, (46628); 205, (46629); 206, (46630); 207, (46631); 208, (46632); 209, (46633); 210, (46634); 211, (46650); 212, (46632). Oval

pounding-stones made out of rolled pebbles or boulders.

213, (46635). Elongate slender implements of basalt, probably used in molding pottery, especially the larger flaring bowls. 214, (46636). A smaller implement of similar form used as a polisher for particular vessels.

215-216. 215, (46637); 216, (46638). Flat stones with straight groove for smoothing arrow-shafts.

217, (46643). An unfinished ax of basalt.

218, (46651). A mortar for pounding and grinding mesquite beans.

219, (46653). Rude, partially grooved ax.

220, (46654). Small quartzite pestle.

221, (46659). A very regular, much-worn basaltic metate.

222, (47926). A large, well-worn metate.

223-226. 223, (46660); 224, (47927); 225, (47928); 226, (47929). Rubbing stones for metate.

227-228. 227, (47930); 228, (47931). Broken hatchets with annular groove near the hammer end.

229-232. 229, (47932); 230, (47933); 231, (47934); 232, (47935). Rude hatchets or digging implements notched on the side.

233-234. 233, (47936); 234, (47937). Hammers or pounding-stones with groove around the middle.

235-248. 235, (47938); 236, (47939); 237, (47944); 238, (47951); 239, (47952); 240, (47953); 241, (47954); 242, (47955); 243, (47956); 244, (47958); 245, (47959); 246, (47963); 247, (47964); 248, (47965). Pounding-stones.

249-255. 249, (47940); 250, (47941); 251, (47942); 252, (47943); 253, (47960); 254, (47961); 255, (47962). Small smoothing-stones.

256, (47945). Quartz pestle.

257, (47946). Stone for crushing and grinding mesquite beans.

258-261. 258, (47947); 259, (47948); 260, (47949); 261, (47950). Small disk-shaped hammer-stones with finger pits or depressions usually on both sides.

262-265. 262, (47966); 263, (47967); 264, (47968); 265, (47969). Stones with flat surface and a single straight groove for polishing or straightening arrow-shafts.

266-267. 266, (47971); 267, (47972). Similar stones, with two and three grooves, used for same purpose.

268, (47970). Piece of soap-stone used for moulding bullets.

269, (47974). Rude mortar for grinding paint.

270, (47973). Muller for grinding paint in the paint mortar.

ARTICLES OF CLAY.

These are few and simple and chiefly of the yellow micaceous ware, some of it blackened by use so that the original color cannot now be observed. Some of the pieces are of red ware with ornamentations.

273-274. 273, (47431); 274, (47432). Pottery moulds for bottoms of vessels.

275, (47434). A pitcher-shaped teapot of red micaceous ware, with handle; a row of projecting points around the middle, one-half of these (those on one side) having the tips notched. There is a triangular spout in front, the opening to it being through numerous small round holes forming a strainer. Capacity about three pints. (Fig. 698.)

[Illustration: Fig. 698. 47434]

276, (47435). Small pitcher-shaped cooking pot with handle and crenulate margin.

277-278. 277, (47436); 278, (47437). Small plain bowls used in cooking.

279, (47438). A small boat-shaped bowl resembling a pickle dish.

280, (47439). A small, polished black olla.

281, (47440). A small flat flaring bowl of red ware, with simple, narrow, inner marginal black band and an inner sub-marginal line of triangular points with dots between them.

282, (47441). Small image of a quadruped, very rude; impossible to determine the animal intended; white ware with undulate black lines.

283, (47442). Image of a small bird with wings spread; white ware with black lines.

284, (47443). Small bowl of white ware, ornamented with red triangles and squares bordered by black lines.

285, (47444). Specimen of the paint used by the Indians to ornament themselves in their dances.

ARTICLES OF BONE AND HORN.

271, (46656). Corn-husker; handle of antelope-horn and point of iron.

272, (48047). Implement of horn, perforated for straightening arrow-shafts.

COLLECTIONS FROM OLD POJUAQUE.

ARTICLES OF STONE.

286-288. 286, (46661); 287, (46662); 288, (46714). Fragments of metates.

289, (46663). Large, very regularly shaped and much worn metate.

290-296. 290, (46664); 291, (46665); 292, (46666); 293, (46667); 294, (46668); 295, (46669); 296, (46670). Rubbing stones for metates, mostly broken.

297-319. 297, (46671); 298, (46672); 299, (46673); 300, (46674); 301, (46675); 302, (46676); 303, (46677); 304, (46678); 305, (46679); 306, (46683); 307, (46684); 308, (46695); 309, (46690); 310, (46680); 311, (46701); 312, (46702); 313, (46705); 314, (46709); 315, (46710); 316, (46711); 317, (46712); 318, (46713); 319, (46715). Smoothing stones.

320-335. 320, (46681); 321, (46682); 322, (46685); 323, (46686); 324, (46687); 325, (46688); 326, (46689); 327, (46690); 328, (46691); 329, (46692); 330, (46693); 331, (46694); 332, (46699); 333, (46704); 334, (46706); 335, (46707). Hammers or pounding stones, mostly rude and simple, showing but little preparation.

336-338. 336, (46697); 337, (46698); 338, (46700). Rude unpolished celts.

339, (46703). A sharpening stone. Slate.

340, (46708). Grooved stones for polishing arrow-shafts.

ARTICLES OF CLAY.

These consist of only a few fragments of ancient ornamented pottery.

341-342. 341, (46716); 342, (46717). Fragments of pottery from the ruins of the old pueblo.

COLLECTIONS FROM SANTA CLARA.

ARTICLES OF STONE.

343-349. 343, (46762); 344, (46763); 345, (46764); 346, (47535); 347, (47552); 348, (47563); 349, (47564). Metates or grinding stones.

350, (46765). Blocks of stone from the walls of a ruined pueblo, (Liparito or Mesa.)

351-352. 351, (46767); 352, (46780). Rude hatchets or digging stones, notched at the sides and one end, more or less chipped.

353, (46781). Stone hammer, regular in form, grooved, and more than usually slender and pointed.

354-355. 354, (46782); 355, (46787). Pounding stones, chipped and notched at the sides.

356-357. 356, (46792); 357, (46793). Rounded pounding stones with finger pits.

358-359. 358, (46794); 359, (46799). Spherical stones used for casse-tetes, or in common parlance, slung-shot.

300-378. 360, (46800); 361, (46801); 362, (46802); 363, (46815); 364, (46828); 365, (46830); 366, (46832); 367, (46834); 368, (46841); 369, (46873); 370, (46881); 371, (46896); 372, (46965); 373, (47565); 374, (47679); 375, (47689); 376, (47693); 377, (47701); 378, (47707). Rude hammer-stones, some with notches at the sides, others without; none grooved.

379-381. 379, (46803); 380, (46812); 381, (46814). Rubbing stones for metate; mostly broken.

382, (46813). A rude, broken axe.

383-384. 383, (46824); 384, (46825). Smoothing stones used in making and

polishing pottery.

385, (46826). Grooved stone for polishing arrow-shafts.

386, (46827). Fragments of pestles.

387-392. 387, (46831); 388, (46833); 389, (46842); 390, (46843); 391, (46963); 392, (46982). Smoothing stones.

393-396. 393, (46844); 394, (46864); 395, (47694); 396, (47700). Rubbing or smoothing stones.

397-398. 397, (46865); 398, (46868). Stone balls used as slung-shot.

399-400. 399, (46869); 400, (46871). Small, round hammer stones.

401, (47714). A rudely carved stone, probably intended to represent some animal.

402-404. 402, (46872); 403, (46882); 404, (46895). Grooved hammers.

405, (46983). Large pounding stone.

406-407. 406, (46985); 407, (46986). Bottles containing chips and flakes of obsidian and agate, from ancient pueblo on mesa.

408, (47987). Collection of 10 stones used in smoothing pottery.

409, (47536). Collection of 67 stones used in smoothing pottery.

410, (47537). Twenty-one stone chips and flakes.

411, (47538). Eight hammer stones and chips.

412-413. 412, (47539); 413, (47549). Grinding or rubbing stones for metate.

414, (47551). Stone mortar.

415-416. 415, (47553); 416, (47559). Rubbing stones for metate.

417-418. 417, (47560); 418, (47562). Pounding stones.

419, (47680). Large metate.

420-421. 420, (47681); 421, (47688). Rubbing stones for metate.

422, (46990). Grooved hammer.

423, (47709). Round pounding stone.

424, (47710). Chips and flakes of agate and jasper (one box).

425, (47711). Smoothing stones for pottery.

426, (47713). Chips and flakes of obsidian (one box).

427, (47715). Flakes and arrow heads of obsidian.

ARTICLES OF CLAY.

These consist of vessels of pottery, a few clay images, and two or three clay pipes. The pottery (with the exception of one or two pieces obtained from other pueblos) is all black ware, some of which is quite well polished. Some of the ollas are quite large, the form shown in fig. 699 (46993), predominating; others with rather high neck which is marked with sharp, oblique ridges, as shown in fig. 700 (47023).

[Illustration: Fig. 699. 46993]

POLISHED BLACK WARE.

428, (46993). Olla shown in fig. 699. The somewhat peculiar form of the body, the sharp curve at the shoulder and straight line in the lower half, is the point to which attention is more particularly called, as this appears to be the principal type form of these vessels, with this pueblo.

429, (46994). A jar-shaped olla.

430-433. 430, (46995); 431, (47023); Fig. 700. 432, (47024); 433, (47147). These are well shown in fig. 700. The oblique lines on the neck indicate sharp external ridges. The lip is also usually undulate or crenate. The size is from medium to large, varying in capacity from one to three or four gallons.

434, (46996). A large pitcher, lower part of the body much inflated, neck rather narrow and encircled by a sharp undulate ridge, handle and spout of the usual form; capacity about two gallons. Coarse brown micaceous ware blackened by fire.

435-437. 435, (46997); 436, (46999); 437, (47008). Small flat olla-shaped bowls.

438, 439. 438, (47002); 439, (47014). Small tinajas with angular shoulders.

[Illustration: Fig. 700. 47023]

440, (47019). A rather small flaring bowl with flat bottom, ornamented with oval depressions on the inner surface; the margin is distinctly and somewhat regularly heptagonal.

441-448. 441, (47029); 442, (47123); 443, (47137); 444, (47141); 445, (47142); 446, (47143); 447, (47143a); 448, (47150). Large tinajas most of which are similar in form to that shown in figure 699 (46993); Nos. (47133) and (46137) being the only exception; they are more jar-shaped.

449, (47030). A broken tinaja.

450, (47085). A flaring, flat-bottomed, bowl or dish, similar to number (47019) except that the inner ornamental depressions are spirally arranged.

451, (47109.) A jar or tinaja similar in form to (46993) fig. 699, except that the neck is longer and the lip flaring and undulate.

[Illustration: Fig. 701. 47120]

452-454. 452, (47112); 453, (47127); 454, (47494). Small pitcher, probably a toy, with handle and a long lip projecting backwards as well as in front.

455-457. 455, (47517); 456, (47115); 457, (47132). Flat-bottomed flaring bowls or dishes similar in form to 450, (47019), but without the inner indentation.

[Illustration: Fig. 702. 47123]

458, (47120). A flat-bottomed flaring bowl ornamented internally with spiral ridges and undulated margin shown in fig. 701.

459, (47123). An image of a person in a worshipping attitude, probably intended to represent a Catholic priest chanting. See fig. 702.

460-461. 460, (47134); 461, (47504). Flat-bottomed fan-shaped dishes.

462, (47088). Tea-pot with ordinary handle and spout, copied after the ordinary tea-pot of civilized life.

463, (47116). Basin-like dish, with numerous slightly elevated lines internally.

464, (47136). A duck, small and rude.

465, (47481). An urn-shaped vase with long neck, and without handles. Quite small, scarcely above toy size.

466, (47482). A pottery meal basket used in religious ceremonies and dances; shown in fig. 703. Although differing materially from the Zuni sacred meal baskets, yet, as is shown in the figure, the pyramidal elevations on the margin are retained.

[Illustration: Fig. 703. 47482]

[Illustration: Fig. 704. 47492]

467-468. 467, (47483); 468, (47487). Tinajas, usually with the lip margin undulate.

469, (47492). Pipe, ornamented on the side with an indented line terminating in an arrow-point, probably denoting lightning; fig. 704.

470, (47493). Pipe, small, cylindrical, slightly hexagonal.

471, (47496). A singular canteen or water vessel shown in fig. 705.

472-477. 472, (47497); 473, (47500); 474, (47506); 475, (47507); 476, (47519); 477, (47516). Pottery moccasins, small toy size.

478, (47498). A squat-shaped olla used as a bowl.

479-480. 479, (47501); 480, (47138). A water vessel precisely of the form and ornamentation shown in fig. 700, but with a handle on each side.

481, (47503). Pitcher without spout.

482, (47502). Earth used for whitening in the manufacture of pottery.

483, (47510). Plain bowl.

484, (47512). Plain bowl.

485, (47527). Well formed bowl with foot or pedestal.

[Illustration: Fig. 705. 47496]

486-489. 486, (47001); 487, (47716); 488, (47028); 489, (47717). Flaring bowls with undulate margins.

490, (47718). Bowl similar in form to the preceding one, but much larger.

BLACK OR BROWN WARE.

(Blackened by use on the fire; not polished.)

This ware, when first made and before use, varies in shade from dark earth color to reddish-brown, but the soot, smoke, and fire, when in use, soon darken it; hence it is usually described as black ware. The articles are used for cooking purposes, such as pots--which are usually pot-shaped--some without handles and some with a handle on one side, bowls, &c. The pots vary in capacity from a pint to a little over a gallon.

491-517. 491, (46998); 492, (47000); 493, (47003); 494, (47004); 495, (47010); 496, (47011); 497, (47015); 498, (47021); 499, (47026); 500, (47089); 501, (47100); 502, (47104); 503, (47108); 504, (47119); 505, (47126); 506, (47128); 507, (47488); 508, (47489); 509, (47499); 510, (47505); 511, (47508); 512, (47511); 513, (47521); 514, (47523); 515, (47528); 516, (47529); 517, (47531). Cooking vessels shaped much like the ordinary pot, without handles and without legs.

518-533. 518, (47007); 519, (47012); 520, (47017); 521, (47018); 522, (47020); 523, (47022); 524, (47025); 525, (47092); 526, (47096); 527, (47101); 528, (47111); 529, (47117); 530, (47121); 531, (47124); 532, (47515); 533, (47522). Cooking vessels with handle on one side resembling pitchers.

534-540. 534, (47005); 535, (47009); 536, (47016); 537, (47107); 538, (47129); 539, (47148); 540, (47006). Toy bowls.

541, (47013). A double-mouthed canteen.

542, (47027). A bowl with handle on one side used for cooking purposes.

543-544. 543, (47086); 544, (47090). Globular paint cups, small.

545-546. 545, (47087); 546, (47091). Pipes of the ordinary form, *Tierra amarilla*.

547-549. 547, (47093); 548, (47097); 549, (47098). Images similar to that shown in fig. 702.

550, (47094). Double paint-cup.

551, (47095). Imitation in pottery of a Derby, or some round-crowned, straight-rimmed hat.

552-555. 552, (47099); 553, (47102); 554, (47118); 555, (47122). Small, somewhat boat-shaped dishes; that is, dishes slightly oval with the margin flared at the ends: used as soap dishes.

556, (47103). Small image of a person bearing something on each arm.

557, (47105). A gourd-shaped pipe.

- 558-559. 558, (47106); 559, (47490). Bowls with legs; margin undulate.
- 560, (47110). Pottery basket with handle, with smooth margin and without ornamentation.
- 561, (47113). Globular cooking-pot.
- 562, (47114). Skillet with handle and feet.
- 563, (47130). Toy cooking vessels.
- 564-565. 564, (47131); 565, (47139). Sitting images wearing something like a crown on the head.
566. Sitting image with representations of feathers on the head.
- 567-568. 567, (47145); 568, (47146). Images.
- 569-570. 569, (47151); 570, (47300). Fragments of pottery from the mesa.
- 571-572. 571, (47479); 572, (47532). Doubled-bellied bottles used as water vessels.
- 573, (47491). Small cup with handle.
- 574, (47495). Image with horns.
- 575, (47507). Bowl with straight side and flat bottom.
- 576-577. 576, (47509); 577, (47533). Toy bowls.
- 578, (47514). Plain bowl with foot or pedestal.
- 579, (47513). Small pitcher with handle and spout; ordinary form in civilized life.
- 580, (47520). Tinaja.
- 581-583. 581, (47525); 582, (47526); 583, (47530). Potter's clay of the kind used in making the preceding vessels.

WHITENED WARE WITH COLORED DECORATIONS.

There are but few specimens of this ware, which are chiefly important from the fact that the material is of that firm, close, and superior quality that characterizes the ancient pottery of that region. The decorations and general appearance also ally it to the ancient ware.

- 584, (47476). A turnip-shaped canteen; the only opening being a small hole in the top of the handle, which arises from the top in the form

of a semicircular loop. Decorations consist of three bands around the upper half, the first alternate white and black squares, the second a plain red band, and the third or lower like the first. Capacity about three quarts. (Fig. 706.)

[Illustration: Fig. 706. 47476]

585, (47477). A bowl decorated internally with a submarginal band consisting of a vine and leaf; externally with a band of small pear-shaped figures; all in black.

586, (47478). Canteen of the usual form.

587, (47480). Turnip-shaped canteens; small, circular mouth at the center on top; on each side a knob.

VEGETAL SUBSTANCES.

587 1/2, (46829). Spinning top copied from the ordinary top of civilized life.

COLLECTIONS FROM TESUQUE.

ARTICLES OF STONE.

588, (47061). Large regular metate, not much worn.

589, (47063). Metate with legs, regularly oblong, not much worn.

590, (47062). Stone axe and chisel combined.

ARTICLES OF CLAY.

691, (47064). Medium-sized tinaja of the usual form, quite regular and symmetrical, white ware with decorations; zigzag band around the neck; body divided into compartments with a large three-leaved figure in each.

592, (47065). Tinaja similar in form and size to the preceding; black polished ware.

COLLECTIONS FROM TURQUOISE MINE.

This collection, which is a small one, consists, with the exception of some bows, arrows and quivers, of stone hammers only, which were used for mining purposes.

593-594. 593, (47066); 594, (47082). Mining stone-hammers; are large and roughly hewn, usually with an imperfect groove around the middle.

595, (47083). Bows, arrows and beaded quiver.

596, (47084). Bows, arrows and plain quiver.

597, (48048). Bird snares.

COLLECTIONS FROM SANTO DOMINGO.

The collection from this pueblo consists chiefly of pottery belonging to the white decorated variety with ornamentation in black. But few articles of stone were obtained.

ARTICLES OF STONE.

598-599. 598, (47182); 599, (47185). Stone hatchets with broad annular groove near the blunt end.

ARTICLES OF CLAY.

600, (47154). Medium-sized tinaja, much, ornamented with vines and birds; body with a broad belt of Greek frets with leaf ornaments above and below.

601, (47155). Similar in every respect to the preceding except that the neck has on it only figures of the cactus leaf.

602, (47157). Tinaja, medium size; zigzag band around the neck, body ornamented with triangles and curved twigs with pinnate leaves.

603, (47156). Large tinaja with scalloped band around the neck; a broad belt of straight lines and crescents on the body.

604, (47158). Large tinaja shown in Fig. 707.

[Illustration: Fig. 707. 47158]

- 605, (47159). Water vessel somewhat in the form of a teapot, with short, straight, cylindrical spout, open on the top, and a transverse loop handle. Ornamented with bands of small triangles.
- 606, (47223). Similar to preceding, except that the handle is not transverse and the figures are chiefly large stars.
- 607, (47160). A cup-shaped ladle with handle like ordinary teapot; birds and triangles internally, zigzag lines externally.
- 608, (47161). Bowl; a double-scalloped, ornamental, broad marginal band and a cross ornament internally. No external ornamentation.
- 609, (47162). Bowl; crenate marginal band and square central figure internally; external surface plain.
- 610-617 610, (47163); 611, (47164); 612, (47165); 613, (47166); 614, (47167); 615, (47168); 616, (47169); 617, (47170). Small saucer-shaped bowls ornamented on the inside only, chiefly with crenate marginal bands and leaf figures. In one 615, (47168), there is the figure of a deer and of a long-billed bird.
- 618, (47171). Pitcher with handle and lip usual form, undulate margin, ornamentation as on the neck of (47158), Fig. 707.
- 619, (47222). Similar in every respect to 618, (47171), except that the handle is twisted.
- 620, (47172). Basket-shaped water vessel with handle, three-leaved figures.
- 621, (47173). Small jar with handle on the side, leaf figures.
- 622-623. 622, (47174); 623, (47175). Small barrel-shaped jars with diamond figures.
- 624-626. 624, (47176); 625, (47178); 626, (47179). Double-bellied water bottles, the first with birds and triangles, the second with triangles and diamonds, and the third with flower and leaf ornaments.
- 627, (47177). Pottery moccasins with leaf and flower ornamentation.
- 628-629. 628, (47180); 629, (47181). Small bowl-shaped cups with handle; ornamentation chiefly triangles.

COLLECTIONS FROM JEMEZ.

ARTICLES OF STONE.

630-635. 630, (47209); 631, (47211); 632, (47212); 633, (47279); 634, (47280); 635, (47281). Stone hatchets with imperfect grooves.

636, (42282). Square block of stone with grooves lengthwise and crosswise on one face, used to polish arrow shafts.

637-638. 637, (47051); 638, (47053). Broken rubbers for metates.

639, (48034). Rude stone pounders.

640, (48038). Pestle.

641, (48059). A celt of jasper.

642-643. 642, (48060); 643, (48061). Smoothing stones.

ARTICLES OF CLAY.

These are mostly white ware with ornamentation in black and red; there are a few black specimens.

644-646. 644, (47186); 645, (47187); 646, (47188). Specimens of clay used in making pottery.

647-648. 647, (47216); 648, (47220). Bricks from an old Spanish wall.

649-655. 649, (47189); 650, (47190); 651, (47191); 652, (47193); 653, (47194); 654, (47195); 655, (47198). Small jar-shaped tinajas. The ornamentation consists of heavy waved lines on the body and interrupted straight lines, triangles and narrow simple or scalloped bands on the neck.

656, (47192). A medium-sized tinaja, swollen at the shoulder and of the form shown in Fig. 372. The upper part is ornamented with a broad belt of animal figures, deer and birds, separated from each other by a triangle between each, two, with the elongate point directed upwards. Middle surrounded by a belt of oblique broken lines.

657, (47196). Olla of the usual form; ornamentation, a vine, leaves and birds.

658, (47197). Medium-sized, jar-shaped olla, with undulate margin and ornamentation as shown in Fig. 708.

[Illustration: Fig. 708. 47197]

659, (47199). Olla with zigzag band around the neck and four dentate bands around the body.

660-665. 660, (47200); 661, (47201); 662, (47202); 663, (47203); 664, (47204); 665, (47215). Canteens of the usual form with two loop handles; upper half ornamented. Chief figures, triangles, stars, and birds.

666, (47205). Tinaja with handle on the side, ornamentation delicate and decidedly neat; zigzag and dotted lines, long pinnate leaf, flowers, &c.

667, (48062). Fragments of pottery from ruins (7 pieces.)

668, (47206). Water vessel resembling in form a tinaja, but with small orifice; ornamented with slender vines and leaves.

669, (47207). Biscuit-shaped bowl; triangular figures on external surface similar to those so common on Zuni bowls.

670, (47208). Small regularly-shaped bowl; triangular figures.

671, (47213). Tinaja with handle; resembling in form and ornamentation, the pitchers found at Canon de Chelley.

672, (47214). Olla with crenate margin; external decorations elks and birds.

673, (47278). Small tinaja with a kind of scroll figure around the body.

674-675. 674, (47276); 675, (47277). Small unburned and unadorned tinajas.

MISCELLANEOUS ARTICLES.

676, (48050). Wooden image decorated with feathers (presented by Mrs. T. Stevenson).

677, (47221). Specimen of the matting used in building.

COLLECTIONS FROM SILLA.

ARTICLES OF STONE.

678, (47224). Small square mortar of lava.

679-680. 679, (47242); 680, (47255). Stone hatchets rather well formed with blunt poll, distinct annular groove, and tapering blade; chiefly of basalt, three of metamorphic rock.

681-682. 681, (47256); 682, (47258). Smoothing stones.

683-684. 683, (47259); 684, (47260). Stone hammers with groove.

685-686. 685, (47261); 686, (47263). Pounding stones.

687, (47262). Small oval mortar (lava.)

ARTICLES OF CLAY.

(White ware with red and black decorations.)

688, (47225). Small toy tinaja, a narrow scalloped band at the margin and near the bottom, crescents between.

689, (47227). Tinaja with small orifice, duck figure in red.

690, Water vessel in form of a duck; orifice on the back, wings formed into loop handles. Red and black decorations.

691, (47228). Water vessel in form of a duck; orifice over the neck, loop handle on the back.

692-693. 692, (47237); 693, (47239). Water vessels in form of a duck, without handles.

[Illustration: Fig. 710. THE BLANKET WEAVER.]

694-696. 694, (47229); 695, (47230); 696, (47232). Animal images; first probably a Rocky Mountain sheep; the other two probably dogs. Very rude ornamentation without design.

697, (47236). Water vessel of the form and ornamentation shown in Fig. 709.

[Illustration: Fig. 709. 47236]

698, (47238). Medium-sized tinaja with leaf ornaments.

699, (47294). Tinaja with figures like those common on the Zuni ollas.

700, (47818). Water vessel in the form of a horse, white ware

ornamented.

701, (47820). Dog's head, plain.

MISCELLANEOUS.

702, (47264). Specimens of mineral paint. (Ochre or clay-stone.)

703-705. 703, (47265); 704, (47267); 705, (47268). Turquoise drills.

706, (47266). Block of wood to be used in connection with the turquoise drill. Has a simple pit in the center in which the apex of the drill turns.

707, (47269). Wooden war-club of hard oak with serpentine line and arrow point (as on pipe, Fig. 704), cut on one side.

708, (47270). Bow, arrows, and quiver.

709, (47819). Leather bag adorned with feathers, with pebbles inside, used as a rattle in dances.

710, (47234). Tortoise shell with pendent rattles, used as a dance ornament.

711, (47235). A gourd with pebbles inside, used as a rattle.

COLLECTIONS FROM SAN JUAN.

ARTICLES OF STONE.

712, (47760). Flat rubbing or smoothing stone of slate.

713-714. 713, (47762); 714, (47763). Stone hatchets notched at the sides.

715, (47764). Small hammer notched at the sides.

716-717. 716, (47765); 717, (47766). Stone candlesticks, the former with circular base, body hemispherical, with hole in the top. The other (from the altar of the Catholic Church) with square base, the stand short, circular, with moldings.

718, (47767). Square, flat mortar.

719-724. 719, (47768); 720, (47769); 721, (47770); 722, (47799); 723, (47783); 724, (47776.) Pounding stones.

725-733. 725, (47771); 726, (47774); 727, (47777); 728, (47778); 729, (47782); 730, (47785); 731, (47787); 732, (47790); 733, (47792).
Stones with grooves or notches.

734-742. 734, (47772); 735, (47775); 736, (47779); 737, (47781); 738, (47784); 739, (47786); 740, (47789); 741, (47793); 742, (47796). Stone hammers, some grooved, others not.

743-747. 743, (47773); 744, (47788); 745, (47797); 746, (47798); 747, (47808). Smoothing or polishing stones.

748, (47800). A collection of fifty smoothing stones used in polishing pottery.

749-750. 749, (47803); 750, (47804). Small paint mortars.

751, (47805). Scraper and polisher.

752, (47806). Rude animal image, (quadruped).

753, (47807). Hammer.

754, (47809). Hornstone triangular knife.

755, (47810). Collection Of nine stone implements.

ARTICLES OF CLAY.

The collection of pottery made at this pueblo presents quite a variety of articles, such as the ordinary clay vessels, bowls, tinajas, water vessels, &c., of black, polished black, brown, mostly without ornamentation, and white ornamented ware, images, pipes, moccasins, &c.

POLISHED BLACK WARE.

756, (47720). A bowl with indented lines and areas internally.

757-758. 757, (47732); 758, (47742). Globular water vessels with loop handles.

759-761. 759, (47733); 760, (47745); 761, (47750). Small tinajas.

762-764. 762, (47735); 763, (47748); 764, (47749). Flat dish-shaped bowls.

765, (47737). A canteen made upon the same plan as that shown in fig.

706, (47476); that is, with opening only at the top of the loop-handle. The body is crock-shaped with top flat.

766, (47752). Small image.

767-768. 767, (47753); 768, (47759). Straight cylindrical pipes.

769-770. 769, (47754); 770, (47755). Moccasins.

771, (47757). Small dish.

772, (47758). Pipe precisely the same in ornamentation as that shown in fig. 704.

BROWN AND BLACK WARE.

The black are only cooking vessels, not polished, but colored chiefly by use in cooking; the rest are brown.

773, (47726). A very regularly formed teapot with handle and spout, similar to, and evidently modeled after, those used in civilized life.

774, (47728). Sugar bowl with lid, ordinary form.

775-777. 775, (47772); 776, (47739); 777, (47741). Bowls with feet.

778, (47731). Water vessel in the form of a ring, orifice on the outer surface.

779-781. 779, (47734); 780, (47736); 781, (47744). Cooking pots without handles.

782, (47738). Cooking pot with handle, regular pitcher form.

783, (47740). Canteen without handles.

784-785. 784, (47746); 785, (47747.) Small (toy) bowls.

786-787. 786, (47751); 787, (47756). Small (toy) tinajas.

WHITE WARE WITH DECORATIONS.

But few specimens; ornamentation simple and in black.

788, (47721). Bowl; internally an undulate marginal band, externally a middle band of diamonds and ovals.

[Illustration: Fig. 711. 47723]

789, (47730). Bowl; broad inner marginal band of outline blocks

alternating with snake-like figures, external marginal band of outline leaves.

790, (47722). Canteen of the usual form with knobs at the sides.

791, (47723). Small tinaja shown in Fig. 711.

792, (47725). Small tinaja with cross on the neck and a double scalloped middle band.

793, (47724). Water vessel in the form of a duck, loop-handle on the back; plain.

794, (47719). Small tinaja.

795, (47727). Canteen of usual form, knob handles, with circle and square.

MISCELLANEOUS ARTICLES.

796, (47811). Head mats of corn-husks, ring-shaped and painted.

797, (47812). Arrow-points, chips, flakes, &c.

798, (47813). Young otter skin.

799, (47814). A scarf to be worn over the shoulder while dancing; with long beaded streamers and tassels.

800, (47815). Medicine bag.

801, (47801). Pottery spindle whirl, simple small disk with hole in the middle.

COLLECTION FROM SANTA ANA.

ARTICLES OF STONE.

802-804. 802, (47284); 803, (47285); 804, (47286). Stone hatchets with groove.

ARTICLES OF CLAY.

These consist of white ornamented ware.

805, (47287). Animal image, probably a fawn, handle on the back.

806-809. 806, (47290); 807, (47291); 808, (47292); 809, (47293). Small tinajas with decorations in black. The figures are the same as those found on Zuni pottery--scrolls, triangles, scalloped lines and birds, but no antelopes or deer.

COLLECTION FROM SANDIA, N. MEX.

810-811. 810, (47240); 811, (47241). Biscuit-shaped unburnt bowls.

COLLECTION FROM COCHITI.

ARTICLES OF STONE.

812-815. 812, (47901); 813, (47905); 814, (47474); 815, (47475). Hat-shaped lava stones used in cooking bread; they are heated and placed on top of the cake. This is an old custom almost entirely abandoned, and now practiced only by a few families of this pueblo.

816-818. 816, (47906); 817, (47907); 818, (47909). Regularly formed pestles.

819-820. 819, (47908); 820, (47910). Pounding stones with groove.

821-822. 821, (47911); 822, (47919). Grooved hatchets or axes.

823-824. 823, (47920); 824, (47923). Smoothing stones.

825, (47924). A collection of 20 smoothing stones.

826, (47925). Seven oval segments or disks of gourd, regularly cut and edged for scraping and smoothing pottery.

827-828. 827, (47470); 828, (47471). Hatchets or pounders (for it is doubtful to which class they belong), with handle yet attached. The second was probably used as a hatchet, the first more likely as a pounder.

829, (47472). Well-shaped hatchets.

830, (47473). Lava mortar.

ARTICLES OF CLAY.

These, with only one or two exceptions, consist of white decorated ware; the bottoms are polished red as usual, but the decorations are in black.

831-832. 831, (47273); 832, (47274). Canteens with loop handles on the side, the first with a star or rosette ornament in the top and scalloped line around the middle, second with triangular figures.

833, (47275). Plain unburnt tinaja.

834, (47288). Image, duck's body with cow's head.

835, (47289). Duck image. This and also the preceding with loop handle on the back and trident figures on the sides.

836, (47295). Pitcher-shaped cup, with handle, ornamentation, oblique dashes.

837, (47296). Deep, olla-shaped bowl; anvil-shaped figures on the outside.

838, (47297). Small canteen, loop-handles at the sides, central star ornament.

839-840. 839, (47445); 840, (47446). Bowls adorned with sprigs and flowers internally and stars externally; quite neat.

841-844. 841, (47447); 842, (47448); 843, (47449); 844, (47460). Bowls; most of them with a narrow dotted marginal band externally and internally. 841, (47447) has a central star inside and a band of triangles on the outside. 842, (47448) with no other ornamentation. 843, (47449) and 844, (47460) with animal figures on the inner face.

845, (47461). A biscuit-shaped bowl, with vertical ridges on the external surface.

845 1/2, (47462). Water vessels, the body shaped as the ordinary tinaja, surmounted with outstretched arms and human head, the orifice through the mouth. Scroll ornaments.

846, (47463). Canteen of the usual form with loop handles and leaf ornaments.

847-848. 847, (47464); 848, (47466). Duck images used as water vessels.

849, (47465). Water vessel; animal image somewhat resembling a fish, but

was probably intended for a duck; loop handle on the back and at each side.

850, (47468). Gourd-shaped water vessel with animal head at the apex, as in Fig. 709.

851, (47467). Toy cooking vessel of unadorned brown ware.

852, (47816). Large tinaja of white painted ware, with lid much like Fig. 651, (39533), plate 81.

MISCELLANEOUS ARTICLES.

853, (47301). Specimen of dried melon; is twisted like a rope.

854, (47392). Fox skin.

855, (47303). Brick from a wall.

856, (47304). Copper cannon ball scarcely one inch in diameter.

857, (47305). Copper kettle with handle.

858, (48049). A musical instrument.

COLLECTIONS FROM SAN ILDEFONSO.

The collections from this pueblo were the largest made during the year 1880, consisting of pottery of different kinds, black and brown painted ware, stone implements and wooden utensils.

ARTICLES OF STONE.

858 1/2-861. 858 1/2, (47976); 859, (47977); 860, (48031); 861, (48044). Lava mortars.

862, (48032). Mortar with three cavities.

863, (47978). Pestle and rubber combined.

864-867. 864, (47979); 865, (47985); 866, (47017); 867, (48025). Rubbers for metates, of regular form.

868-877. 868, (47986); 869, (47999); 870, (48000); 871, (48010); 872,

(48013); 873, (48015); 874, (48016); 875, (48026); 876, (48033); 877, (48039). Pounding stones.

878, (47987). Paint muller.

879-880. 879, (47988); 880, (48045). Pestles.

881-883. 881, (47989); 882, (48028); 883, (48029). Grooved hammers.

884-887. 884, (47990); 885, (47996); 886, (47998); 887, (48030). Hatchets with grooves or notches.

888-892. 888, (47997); 889, (48001); 890, (48009); 891, (48040); 892, (48043). Smoothing stones.

893, (48014). Round stone used as slung shot.

894, (48027). Chisel.

ARTICLES OF CLAY.

These consist of painted white ware with decorations in black; polished black ware and black and brown ware.

The white pottery resembles very closely, in the forms, color, and ornamentation, that from Taos and Cochiti, the white in all these being of a creamy color.

[Illustration: Fig. 712. 47326]

895-897. 895, (47319); 896, (47321); 897, (47325). Medium-sized hemispherical bowls, ornamented, on the inside only, with star figures or rosettes and triangles.

898-899. 898, (47320); 899, (47324). Similar bowls with similar ornamentation both internally and externally.

900, (47323). Bowl of similar form and size; only decoration a broad external marginal band with oval spaces in it.

901, (47322). Small bowl with decorations on the inner surface only.

902-903. 902, (47326); 903, (47327). Medium-sized olla-shaped bowls not adorned internally; marginal line of dots externally. Latter with zigzag belt; former with serpents, crosses, and figure of bottle on a stand; Fig. 712.

904, (47329). Large tinaja with cover. Vines and leaves on the neck, and around the body a broad belt of figures resembling fringed medicine

bags.

905-906. 905, (47334); 906, (47336). Canteens of the usual form, with loop handles at the sides; the first ornamented with the common central star and triangles, the second has no central figure. Posterior Half with interlaced figure.

907, (47335). Globular canteens; side handles; cactus leaves and simple broad bands.

905, (47337). Flower-pot precisely of the usual form, with hole in the bottom, grooved outline, dentate bands.

909-916. 909, (47351); 910, (47354); 911, (47359); 912, (47360); 913, (47361); 914, (47362); 915, (47363); 916, (47364.) Small bowls with decorations on the inner face.

917, (47373). Small pitcher; handle broken off.

918, (47387). A bowl of peculiar and significant ornamentation.

919-920. 919, (47389); 920, (47390). Bowls ornamented on the inner face only.

921-922. 921, (47391); 922, (47392). Straight-sided or crock-shaped, deep bowls, with foot. First with a zigzag submarginal band on the inner side and a zigzag line and dots around the body on the outside. The latter with a dotted inner marginal band, a vine and leaves around the outside.

923-925. 923, (47399); 924, (47400); 925, (47401). Pear-shaped or conical water-vessels, with animal heads at the apex; decorations simple.

926-927. 926, (47414); 927, (47415). Olla-shaped bowls, of medium size, ornamented internally and externally.

928, (47416). Basin-shaped bowl, with foot, ornamented internally and externally.

929, (47426). Bird image.

RED WARE WITH DECORATIONS IN BLACK.

930, (47328). Medium-sized tinaja, bead figures or necklace around the neck, zigzag band on the shoulders, sprig, double looped and serrate triangular figures on the body.

931, (47331). Small tinaja; undulate marginal band, tear-drops on the neck, large band divided into triangles pointing alternately up and

down, fitting into the spaces, each with two oval, red spaces.

932, (47333). Small tinaja, with alternating triangles base to base on both neck and body, those on the body with circular spaces.

933, (47338). Flower-pot of the ordinary form, with undulate margin, zigzag submarginal band, belt of flower ornaments on the body.

934, (47340). Bowl with a belt of anvil-shaped figures on the outside.

935, (47352). Bowl decorated on the inside, outside plain.

936, (47355). Bowl with vine externally and internally.

RED AND BROWN WARE WITHOUT DECORATIONS.

937-939. 937, (47339); 938, (47358); 939, (47379). Plain bowls.

940, (47353). Olla-shaped bowl with undulate margin.

941-942. 941, (47370); 942, (47375). Small tinajas.

943, (47372). Bottle with square groove around the middle.

944, (47376). Oval dish.

945-946. 945, (47377); 946, (47378). Flat circular dishes.

947, (47397). A rather large, regular-shaped fruit jar with margin expanded horizontally.

948-953. 948, (47404); 949, (47405); 950, (47406); 951, (47409); 952, (47410); 953, (47411). Bird images.

954-956. 954, (47407); 955, (57408); 956, (47413). Images of the human form, first with hat on, second apparently praying, third with arms extended and sash crossing in front from each shoulder.

957, (47424). Images of the human form.

958, (47403). Basket-shaped, toy water-vessel with loop handle.

BLACK POLISHED WARE.

959-961. 959, (47341); 960, (47350); 961, (47417). Bowls.

962-963. 962, (47356); 963, (47357). Dishes with undulate edge.

964-965. 964, (47365); 965, (47366). Toy bowls.

966-967. 966, (47380); 967, (47386). Small basket-shaped vessels with handles across the top.

968, (47388). Oblong dish.

969, (47393). Basin with foot and undulate margin.

970, (47394). Toy jar.

971-972. 971, (47395); 972, (47396). Toy pottery kegs, the latter with a handle.

973, (47402). Duck-shaped water-vessel.

974, (47412). Two-headed bird image.

975, (47418). Small paint cup.

976-977. 976, (47419); 977, (47420). Bowls with arched handle.

978-979. 978, (47427); 979, (47430). Toy dishes.

BLACK WARE NOT POLISHED.

980-982. 980, (47367); 981, (47369); 982, (47371). Cooking pots.

MISCELLANEOUS ARTICLES.

983, (47318). Ox cart, "carreta."

984, (47425). Arrow straightener of bone; (a piece of bone with round holes in it).

COLLECTIONS FROM TAOS.

The collections made from this pueblo were quite extensive and varied.

ARTICLES OF STONE.

985-997. 985, (47846); 986, (47848); 987, (47852); 988, (47854); 989, (47856); 990, (47858); 991, (47863); 992, (47873); 993, (47875); 994, (47879); 995, (47880); 996, (47883); 997, (47887). Stone hatchets grooved.

998-1004. 998, (47847); 999, (47853); 1000, (47861); 1001, (47864); 1002, (47876); 1003, (47878); 1004, (47882). Rounding stones.

1005-1014 1005, (47855); 1006, (47860); 1007, (47866); 1008, (47869); 1009, (47880); 1010, (47871); 1011, (47872); 1012, (47877); 1013, (47881); 1014, (47884). Stone hammers very rude, sometimes with a groove, but generally with simply a notch at each side.

1015, (47859). Rude stone knife.

1016-1021. 1016, (47862); 1017, (47865); 1018, (47867); 1019, (47868); 1020, (47885); 1021, (47886). Rubbing and polishing stones.

1022, (47874). Grooved stone for polishing arrow-shafts (Fig. 713).

[Illustration: Fig. 713.]

ARTICLES OF CLAY.

These are chiefly vessels of brown and black ware, some two or three pieces only being ornamented ware.

1023-1027. 1023, (47821); 1024, (47822); 1025, (47828); 1026, (47829); 1027, (47833). Brown ware, pitcher shaped vessels with handle, used as cooking vessels.

1028-1032. 1028, (47823); 1029, (47824); 1030, (47825); 1031, (47826); 1032, (47827). Cooking pots, brown ware, smoke stained.

1033, (47830). Olla of unburned ware.

1034, (47831). Bowl with handle, black ware.

1035, (47832). Teapot of the ordinary form, polished black ware.

1036, (47834). Small globular olla with undulate margin, of polished black ware.

1037, (47835). Water bottle with four loop handles, brown ware.

1038-1041. 1038, (47836); 1039, (47839); 1040, (47839); 1041, (47845). Small spherical ollas of brown ware.

1042, (47840). Small bowl of black polished ware.

1043, (47841). A globular water vessel with a ridge around the middle; polished black ware.

1044, (47842). Dish of polished black ware.

WHITE AND RED WARE WITH DECORATIONS.

1045, (47844). A singular-shaped bowl shown in Fig. 714. The outside is red but the inside is painted white; ornamentation in black.

[Illustration: Fig. 714. 47844]

1046, (47843). A bottle-shaped canteen with animal head, flower and serrated ornamentation. Red ware.

1047, (47838). Large tinaja, white ware with black ornamentation, sprigs and triangles.

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Errata noted by transcriber:

[List of Illustrations]

710.--The blanket weaver 454

_text reads "434" _

turquoise

normal spelling for this publication

short, circular, with moldings.

_text reads ".?" _

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