

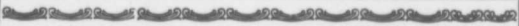


**THE INDIAN AND THE INDIAN
MEDICINE MAN.**

.. By ..

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THE INDIAN AND THE INDIAN MEDICINE MAN.

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The Indian Chief, Tecumseth, it has been said, received the stamp of greatness from the hand of nature. Had his lot been cast in a different sphere he would have shone as one of the most distinguished of men. He was a powerful man, with the soul of a hero. There was an uncommon dignity in his countenance and manners. After death, though he wore no insignia of office, he was easily discovered from among the rest of the slain. Though six feet high, he was perfectly proportioned. Such a type of man is but one among many, and there were many other Indians like him. After the red man came into contact with the white he degenerated. To peaceful communities came the fur trade, and a hell was soon established. The introduction of alcohol, and its attendant evils, made the Indian what he is to-day, but, nevertheless, we are able to look back and admire what existed before the fall.

The vindictive blood of the savage runs in the veins of many of the people of this continent who do not know it. It is difficult to estimate the effect that this mixture has had on the progress of American and Canadian affairs.

The skin of the Indian was dark, of a reddish hue, and thinner than that of the white man. The surface was very smooth and lines and indentations regular. It has been stated that the poison oak and the poison ivy did not affect the skin of the Indian; in fact, they are said to have used the stem of the poison oak for making baskets. The eyes are black and deep set, the nose large and aquiline. The hair of many was black, but there were many of both sexes, ranging from infancy to old age, with hair of a bright silvery grey. Sometimes the hair was almost white. The beard, as a rule, was deficient.

The blanket was the chief article of dress. Red blankets were used by the young and green ones by the aged. Leggings were worn by both men and women, and, as a consequence, were differently shaped. The blankets and the mantelettes used by the women generally lasted about a year.

Many of the whites assumed the garb of the Indian. We read that when Henry was rescued from death at the taking of Fort Michilimackinac, he was forced to adopt the garb of an Indian. His foster father, who had taken him under his protection, cut off his hair and shaved his head, with the exception

of a spot on the crown, painted his face with three or four different colors, and provided a shirt for him ornamented with vermilion mixed with grease: a collar of wampum was placed upon his neck and a chain of wampum was suspended on his breast. Both arms were decorated with bands of silver above the elbow, and others were placed upon his wrists. His legs were covered with footgear corresponding to what we call "artics," made of scarlet cloth. Over all he wore a scarlet blanket or mantle, and on his head a large bunch of feathers. He says that the ladies of the village thought he was very much improved, and they even condescended to call him handsome.

Moccasins were used on the feet, and travellers who have walked long distances in moccasins without a stiff sole have found it necessary to turn the toes in to rest the feet. This appears to be the reason why the Indians turned the toes in.



No. 1.

SMOKING AND DRYING SKINS AND MEAT.

Foods such as meats and fish were preserved by smoking and hanging in the air (plate 1). The meat of the buffalo was oftentimes cured in the sun without either smoke or salt. Jerked buffalo meat was prepared by being cut into thin slices and hung over the fire to dry. In this way it was cured indefinitely. The Indians seldom ate raw meat. When the meat was cooked it was well done, and most frequently roasted. Other foods, such as Indian corn, maize, and wild rice, were used to a very great extent. The preparation of the corn is described by Henry in his journals. It was boiled in a strong lye to facilitate the removal of the husks. It was then mashed and dried, when it became soft and friable like rice. Another author says that the corn was placed in a mixture of water and wood ashes, the

weak lye thus produced would loosen the hard tough skin covering each grain in from ten to fifteen minutes. It was then taken from the pot and thoroughly washed in a basket by dipping it into a stream or pouring water over it. After it was dried for a short time it was pounded in the cornmill. The mill consisted of a log of hardwood, two feet long, the upper end of which had been burned out to form a half-egg shaped hole nine or ten inches deep. A pounder, or beetle, was used to crush the corn and the meal was then passed through a fine sieve, and the coarser portion was again returned to the mill and treated as before.

The allowance of corn for each man on a voyage was a quart a day. A bushel, with two pounds of prepared fat, was reckoned to be sufficient food for a month's subsistence. No other allowance of any kind was made, not even of salt, and bread was never



No. 2.

WELL FORMED WOMEN, SHOWING LONG HAIR AND DRESS.

thought of. The men were healthy and capable of performing heavy labor.

Sugar was used by the Indians and was produced by boiling down the sap of the maple tree. I find a notice in an English magazine of 1765 stating that the Americans had discovered the method of making sugar from a liquid obtained by boring the maple tree. Indians no doubt used this method before the arrival of the white man.

Many berries were gathered and used as food. Among these were whortleberries, blackberries, raspberries, strawberries and cranberries. Wild honey was occasionally obtained. As vegetables, wild potatoes, artichokes, and various roots were used. Very little salt was used, and milk was not relished. The food was boiled until it was well done.

At first the cooking was done in wooden vessels, the water being boiled by hot stones immersed in them. This vessel was called an Assinaboine or stone boiler. Brass, iron and tin utensils came into use later on. The meals were eaten at no regular hour. The Indian ate, as a rule, when he was hungry. It is believed that they were enormous eaters, but many observers say that this was not the case. The women and the children did gormandize, but the men ate but two meals a day, and practiced great prudence and self-denial in this respect. They were forced to live carefully in order that they might be equal to the fatigues of war and of the chase. Like the Jews, they would not eat pork.

Marriages took place, as a rule, early. The bride was purchased with a few robes or a few horses, and then the expense ended. After this she was more than self-supporting. The women were well formed (plate 2.) They preferred female to male



No. 3.

TORTURING CEREMONIES IN THE MEDICINE LODGE.

attire. There were more women than men among the Indians, notwithstanding the fact that more males were born. Even when no wars existed more males died than females. The women cooked, brought wood and water, dried the meat, dressed the robes, made clothing, collected the lodge poles, packed the horses, cultivated the ground, and performed tasks generally performed by men or servants. The women were not servants, however. They indulged in athletics and played games. Sometimes they were admitted to the councils of the men and even to the ranks of the medicine man.

Owing to the amalgamation of the white and the red race the red man is rapidly losing his identity. In this respect he differs greatly from the negro.

The Indians were a people of aches and pains. Some of them would lie in bed for months with trivial ailments. They were apt to pay considerable attention to minor troubles. It has been said that the Indian would ride 100 miles for salve for a chapped lip, but that he would die of pneumonia without calling in the assistance of a medicine man. They were undoubtedly able to undergo considerable fatigue.

When aged and infirm they received an annuity from the tribe, or help from friends and neighbors. The chiefs generally interested themselves in the aged and infirm.

The Indians believed in the immortality of the soul, and had glimpses of the beauties and the happiness of the life to come.

It is said to have been characteristic of the Indian to suffer in silence (plate 3), and die composedly. Graves were dug facing the east and the west, the head of the corpse was placed in the eastern portion of the grave so that he or she might be able to look to the west towards the happy hunting ground).



No. 4.

DRUMS AND RATTLES.

Abodes.—The lodges were constructed by placing poles in a circle on the ground. These poles were joined together on the top, and over all buffalo robes or skins were placed. A spacious opening was left above to let out the smoke and for purposes of ventilation. The fire was built in the centre of the lodge to warm the air, and as this air ascended through the opening the tepee was ventilated.

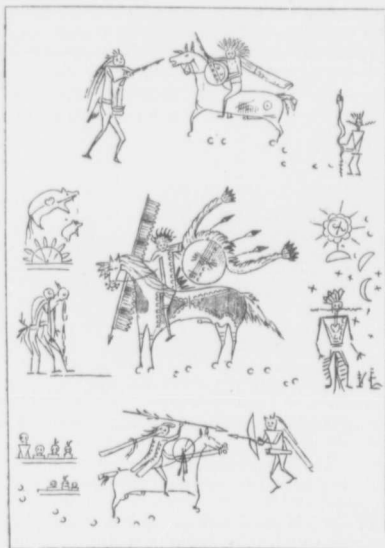
Music.—The Indians used various musical instruments, among which were drums (plate 4), rattles, whistles and lutes. The drums and the rattles were used when medical degrees were granted.

Literature or Writing.—The picture writing was very curious. The robe of a distinguished doctor or medicine man is worth studying; (plate 5). In the one shown the medicine man has represented himself in full dress on his favorite horse. From the drawing at the top and the bottom of the robe it would seem that he has set up his claims as a warrior, having killed seven men in battle. On either side of the robe are to be found

numerous figures denoting his profession. One represents him vomiting a patient with herbs. In another place he has represented his medicine, or totem, the bear, with the rising sun and the different phases of the moon, to which these magicians looked for the operation of their charms and mysteries in effecting the cure of the afflicted.

INDIAN MEDICAL EDUCATION.

England has been called the Paradise of quacks. Every nation is infested with them, and they are patronized not only



No. 5.

ROBE OF AN EMINENT MEDICINE MAN.

by the poor and uneducated but by the rich and influential. The unbounded credulity of the white man is akin to that of the savages. We find him placing his trust in the tar water of Bishop Parkman, in the metallic tractors of Perkin, in the animal magnetism of Prescott, in the granules of Hahneman, and in the Christian Science and faith cure of Mrs. Eddy.

We must not forget that we civilized people have our medical relics, for it is not very long since curious remedies were in use by the members of the medical profession. We find that the ashes of human hair mixed with hog's lard were used to anoint dislocated joints, that ashes were used to stop bleeding, that an oil distilled from the ashes of human hair and mixed with honey was rubbed on to cause the hair to grow.

Among civilized nations we have a written history of our relics and this history is handed down to us in the shape of books of reference that have been printed from time to time. Among the savage nations the history of the relics has been partly written in hieroglyphics and has been in part handed down by word of mouth. Much of the information thus to be obtained depends upon the statements of eye witnesses or of those who were intimately associated with the grand medicine lodges.



No. 6.

MANDAN INDIAN VILLAGE.

A very large population inhabited the North American continent before the advent of the white man, and descendants of the aborigines are still to be met with. The Indians lived in towns and villages (plates 6 and 7) where there was to be found all the noise and bustle incident upon such congregations of people. The medicine men were very prominent in their midst. They were highly respected and possessed great power. There were many curious superstitions regarding them.

It was believed that if the medicine man was not paid no cure would be effected, but that if he was paid his work would be well done and the patient would receive great benefit. The medicine man was not always paid in specie but, like many of our brethren of the out-lying districts, he was forced to accept

various commodities in return for his services. At times he was found to be more grasping than he should have been, but all this goes to prove that there is nothing new under the sun.

The Indians possessed a greater knowledge of medicine and surgery than the Chinese, although the Chinese profess to have a much more ancient civilization. The Indian knew that heat made the blood circulate more freely; he knew that the lungs were the organs with which the animal breathed, and that the kidneys must act or else death would certainly ensue.

He had no very distinct or definite ideas regarding modern pathology. The knowledge of pathology among civilized nations has only been obtained of late years, very largely through the aid of the microscope, the *post mortem* examination, and a study of organic chemistry.



No. 7.

CAMANCHE INDIAN VILLAGE.

Some of the Indian tribes thought that disease was due to some mythic existence that could be driven out by incantations, and propitiated by rites and ceremonies. Others again thought that disease was due to bile in the painful part and the medicine man attempted to draw this out through a bone that was used as a suction tube. He endeavored to force this belief upon the sick one by spitting out saliva that was tinged by the juice of a root that he was chewing (plate 8). Others believed that all pains were due to the bite of worms situated in various parts of the body.

The aborigines learned some comparative anatomy from the experience of the chase. They had names for the heart, the lungs, the liver, the windpipe, and for some other parts.

There were several types of medicine men (plate 9), some of them of much more importance than others. The

medicine men were not always free from danger, and they frequently became victims to superstitious belief. If a patient died, the death was believed to be due to the malefic arts of the doctor, and such a circumstance was sufficient to bring upon him the resentment of relatives.

All tribes selected some animal to which they attributed supernatural or medicinal powers. The whale was chosen by the Indians on the north coast, the war eagle by those on the east side of the Rocky Mountains, and the wolf by those inhabiting the Columbia River district.

An initiation into the Grand Medicine Lodge reminded one of Masonic ceremonies. *Medecin*, the French word for doctor, was corrupted by the English speaking people until at last they called the Indian doctor, the medicine man. Some of the



No. 8.

MEDICINE MAN REMOVING DISEASE.

medicine was supposed to be good and some of it was supposed to be evil. Certain articles were called good medicine or, in other words, propitious and unpropitious.

The society of the Mide or the Medical Faculty was known as the Mide-wiwin. The place in which the degrees were conferred was called the Mide-wegan, or the Grand Medicine Lodge (plate 10). The teachers who officiated were called priests, corresponding to our professors. Four degrees were granted to a candidate and a period of a year elapsed between the granting of each degree, so that the course of study consumed at least four years.

There were three different varieties of the mystery man, called the Mide, the Jessakid, and the Wabeno.

The Mide, or true medicine man, was also a Shaman, though by various authors he has been called prophet, seer, priest, and a pow-wow man.

The Jessakid was also called a seer or prophet but was commonly known as a juggler or a revealer of hidden truths. He had no medical association by which he was bound to others who practised his art. His power was to cause evil, while that of the genuine Mide was to avert it. The lodge used by him was made of four poles that were placed in the ground in such a way as to form an upright cylinder. During the exercise of his functions he got into this and swayed to and fro and made various noises and answered questions that were asked him. If everything was favorable the answers were soon received.



No. 9.

BLACKFOOT MEDICINE MAN IN ROBES.

The Wabeno were called the men of the dawn. Their profession was not thoroughly understood, and their number was so extremely limited that but very little information can be obtained. Some recorded the Wabeno as a degraded form of the Mide. He furnished hunting medicine, love powders, and practised medical magic. By the use of his medicines he was able to pick and handle with impunity red hot stones, burning brands, and to bathe his hands in hot syrup. He was a dealer in fire, and a handler of fire. He sought entrance into the Mide-wiwin and when admitted he became more of a specialist in the practice of medical magic and incantations.

The Mide-wiwin, or Grand Medicine Society.—The origin of the Mide-wiwin, erroneously called the Grand Medicine Society, is buried in obscurity. It consisted of an indefinite number of practitioners of both sexes. Though the Society was graded into four separate and distinct degrees, it was generally thought that any degree beyond the first was a mere repetition. There was much reiteration in the ritual, but this was supposed to aid in impressing the candidate with the importance and sacredness of the ceremonies.

Birch bark records (plate 11) were preserved by the Mide priests or prophets bearing delicate incised lines to represent, pictorially, the ground plan of the number of degrees to which the owner was entitled. Such records or charts were very sacred and were not exposed to public view, being brought



No. 10.

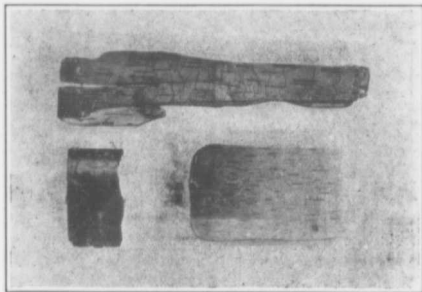
INTERIOR OF MEDICINE LODGE.

forward only after an accepted candidate had attended to a very important matter, namely, the payment of his fee, and even then they were only produced subsequent to the necessary preparation by fasting and the offerings of tobacco.

The record was sometimes seven or eight feet long, consisting of sections that were fastened together at the top by being stitched with strands of basswood. At each end two strips of wood were secured transversely to prevent fraying of the ends of the record.

It is interesting to examine these charts. Two of them have been analyzed in a very interesting article by Hoffman, to which I am indebted for much of this information. (Seventh Annual Report, Bureau of Ethnology, Washington, 1885-6.) One of these is called the Red Lake Chart (plate 12), and the other the Sandy Lake Chart (plate 13).

The Red Lake Chart.—In the Red Lake Chart the large circle at the right side of the chart denotes the earth as upheld by Minabozho. The other appeared at the square projection, Nos. 1, 2, 3, 4, the semi-circular appendages between these representing the four quarters of the earth. Nos. 9 and 10 represent two of the numerous malignant manidos or spirits who endeavor to prevent entrance into the sacred structure of the Mide-wiwin. The oblong colors, Nos. 11 and 12, represent the outline of the first degree of the society, while the inner lines correspond to the route that must be traversed by the candidate during initiation. Entrance to the lodge is directed towards the east, while the western exit indicates the way towards the next higher degree. The four human forms at Nos. 13, 14, 15



No. 11.

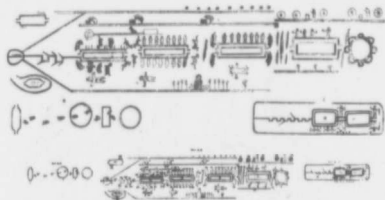
SACRED BIRCH-BARK RECORDS.

and 16 represent the four officiating Mide priests, or members of the faculty, whose services are always demanded at an initiation. Each of these is represented as having a rattle. Nos. 17, 18 and 19 represent the cedar trees, one of this species being planted near each of the outer angles of the Mide lodges. No. 20 represents the ground. The outline of the border at No. 21 represents the bear spirit, to which the candidate must pray, and make offerings of tobacco to compel the bad spirits to draw away from the eastern entrance to the Mide-wegan shown in No. 28. Nos. 23 and 24 represent the sacred drum which the candidate must use in chanting his prayers.

After the candidate has prepared to advance to the second degree, he offers three feasts and chants three prayers to the bear spirit, No. 22. At the entrance to this lodge of the second degree are five serpent spirits, Nos. 30, 31, 32, 33, 34, the evil manidos who oppose the candidate's progress, but it will be

noticed that the four small serpent spirits move to either side of the path, while the large serpent, No. 32, arches its body in the middle to allow him to pass to the second degree. Nos. 35, 36, 46 and 47, are four malignant bear spirits who guard the entrance to the second degree and the exit from it. The form of this lodge is like the preceding one, but there are more priests assisting, as shown by figures Nos. 39, 40, 41, 42, 43, 44 and 45.

When the Mide is of the second degree he receives supernatural powers, as shown at No. 48. The lines extending from the eyes represent the ability to read futurity, the lines from the ears indicate that he can hear what is taking place at a great



No. 12.

RED LAKE CHART.



No. 13.

SANDY LAKE CHART. GIJBWA'S RECORD.

distance, the lines from the hands show that he can touch for good or evil friends or enemies who may be a long way off, while the lines from his feet denote his ability to traverse all space. The small disk upon the breast indicates that a Mide of this degree has had the migis or life shot into his body several times.

No. 50 represents a bad Mide who employs his powers for evil purposes. He can assume the form of any animal, and in this way can destroy the life of his victim. His services are in demand by people who wish to destroy enemies and rivals. He is in the disguise of a bear spirit whose footprints are seen at

Nos. 51 and 52 at either side. The trees represent a forest, this being the location usually sought by a bad priest.

The candidate again crawls beneath the body of the serpent spirit, No. 54, when he is approaching the third degree. Two of the four panther spirits, guardians of this degree, are now awaiting him, Nos. 57 and 58. Spirits inhabiting the lodge are in this degree represented by Nos. 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75 and 76. After the candidate has passed through this degree he becomes a very skilled practitioner; his powers have been very much augmented, and he is represented at No. 77, with his arms extended, and many lines crossing the body, representing darkness and obscurity, and signifying his ability to grasp from the unseen world assistance to enable him to accomplish extraordinary deeds.



No. 14.

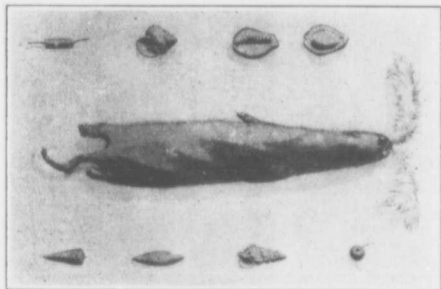
SHOOTING THE MIGIS.

¶ The candidate enters the fourth degree by again using his sacred drum. The greatest spirit and the most powerful of the bad spirits now make a last effort to prevent his entrance at the door, No. 80. The chief opponents are the two panther spirits, Nos. 81 and 82, and the two bear spirits, Nos. 83 and 84. There are many other bad spirits around the structure who make a prolonged resistance to his entrance. The chief of the bad spirits are the bears, Nos. 88 and 96, and the panther, No. 91, and the lynx, No. 97. The outline of a human figure, No. 97, again expresses the power with which it is possible to become endowed after one has passed through the fourth degree. The spots placed on the figure 98 demonstrate that the body is covered with migis, or sacred shells that are symbolical of the *Midewiwin*. From the number of spots it is shown that the migis (plate 14) has been very frequently shot into his body

during the initiation and subsequent degrees, while the lines connecting them demonstrate that he is able to exercise all the functions of the different parts of his body. The Mide of the fourth degree is now able to accomplish the very greatest feats of necromancy and magic.

The rest of the chart indicates the devious paths that must be followed through life by the now fully-fledged doctor. The little scroll, No. 102, at the end, indicates that he has been a graduate for fourteen years.

The Sandy Lake Chart.—The chief points of interest in the Ojibwa's record, otherwise known as the Sandy Lake Chart, are that the spirits are represented as descending to the earth from the far off abode of Kitshi manido in the sky. The four lodges are present, and in them are granted the four different degrees. Each lodge has the posts, one in the first degree, two



No. 15.

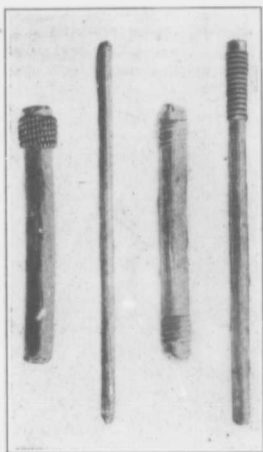
SACRED OBJECTS.

in the second degree, three in the third degree, and four in the fourth degree, placed in position, and one of these posts is the sacred cross, at the foot of which is placed (figure 59) the sacred stone. The articles that are hung up are to represent the presents that must be given, or, in other words, the fees that must be paid by the candidate for his instruction. The priests are represented as using drums and rattles. The sacred objects are to be seen in plate 15. They represent shells that are used in the various degrees; one of these (No. 1) is very similar to the Cowrie. Another (No. 2) looks like a pearly-white Helix. The Mide sac represented in the centre is made of the skin of a mink; in it were carried the sacred objects belonging to the owner, such as colors for facial decoration, amulets, invitation sticks, etc.

¶¶ When a meeting was arranged for the purpose of initiating or passing a candidate, invitation sticks (plate 16) were sent to the neighboring medicine men.

¶¶ The lodge in the first degree contained one sacred post, which was painted red, with a band of green around the top, and upon this was perched an owl (plate 17, figure 1 and 2).

In the second degree the lodge contained two sacred posts, the first of which was the same as that represented in the first



No. 16.

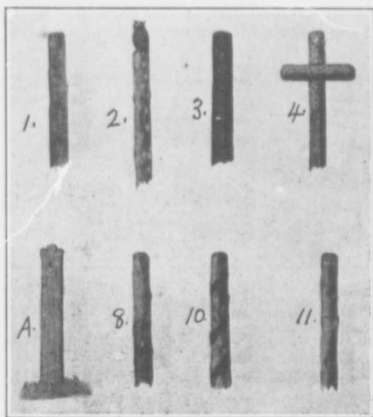
INVITATION STICKS.

degree, while the second was painted with white clay, bearing two bands of vermilion, one about the top and one near the middle (plate 17, figure 11).

In the third degree the lodge contained three sacred posts; the first was painted black, and upon this was placed an owl (plate 17, figure 3). The second was painted with white clay, and upon the top was the effigy of an owl, while the third was painted with vermilion, and it bore upon its summit the effigy of an Indian.

In the fourth degree the lodge contained four sacred posts; the first was painted white upon the upper half and green upon the lower half (plate 17, figure 8). The second was painted in a similar manner; the third was painted red, with a black spiral

line extending from the top to the bottom, upon which was placed the owl (plate 17, figure 10). The fourth was a cross, the arms and part of the trunk of which were white with red spots, intended to designate the sacred migis. The lower half of the trunk of this post was cut square. The face towards the east was painted white to denote light and warmth (plate 17, figure 4). The face towards the south was painted green to denote the source of the thunder bird, who brings the rain and causes the trees and grass and flowers to grow. The face towards the west was painted red to indicate the line of the setting sun and the far-off abode of the dead; and, lastly, the face towards the north was painted black to indicate the direction from which comes all affliction, cold and hunger.



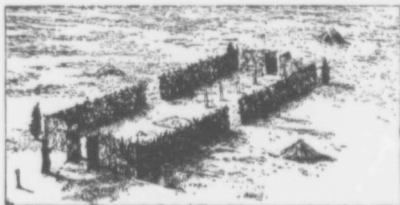
No. 17.

SACRED POSTS OF THE MIDEWIGAN.

In the fourth degree a sacred stone was deposited a short distance from the one entrance to the lodge, next to this was an area that was reserved in order that the applicant might deposit here his presents or, in other words, his fees. About ten paces to the east of the main entrance, in a direct line between it and the sweat lodge, was planted a piece of thin board the top of which was cut to represent a three lobed apex (plate 17 a). One side of this board was painted green while the side that faced the Mide-wiwin was painted red. Near the top was a small opening through which the Mide were enabled to peep into the

interior of the sacred structure in order that they might observe the angry spirits that were occupying it and opposing the intrusion of anyone not of the fourth degree.

The lodges always faced east and west, (plate 18). There were four openings to the lodge in the fourth degree, while in the other degrees there were only two. The cross in the fourth degree symbolized the four days of struggle at the four openings or doors in the north, south, east and the west walls of the structure. At each of these four openings Minabozho, or the great rabbit, appeared and shot charmed arrows into the enclosure at the horde of demons occupying the sacred place, and the bear spirit was the last of these to yield to Minabozho's superior powers. The equilateral cross, or the Greek cross, has become one of the sacred symbols of the Mide within and has special reference to the fourth degree. To the Dakotas it represented the four winds issuing



No. 18.

THE CROSS IN THE MEDICINE LODGE.

from the four caverns in which the souls of men existed before their incarnation in the human body.

Facial Decoration.—Certain facial decorations were adopted to distinguish the candidate during his progress in his studies (plate 19). The student who had obtained the first degree, or the first year student, was decorated with one strip of vermilion across the face near the ears and across the tip of the nose. The student who had obtained to the second degree was decorated with one strip of vermilion across the face near the ears and across the tip of the nose and another across the eyelids, the temples and the root of the nose. The student who had reached the third degree had the upper half of his face painted green and the lower half red. The students who had reached the fourth degree had the forehead and left side of the face from the outer canthus on the eye downward painted green, while four spots of vermilion were placed upon the forehead and four of the same color upon the green surface of the left cheek.

The facial decorations varied according as the candidate subsequently became a priest or professor or remained just as an ordinary member of the society or an alumnus. In addition to this painting of the face the plumes of the golden eagle were worn upon the head and down the back, in the fourth degree, and they were painted red.

The above represents one of the methods of decoration adopted. There may have been several others in different localities similar but not exactly the same.

The Ceremonies.—The ceremonies for each degree were somewhat similar. When an Indian wished to be initiated into the order of the pow-wow, or grand medicine lodge, he paid a large fee to the faculty for his preliminary education. The faculty or priests of the Mide-wiwin were very careful to conceal



No. 19.

FACIAL DECORATIONS OF THE STUDENT OF MEDICINE.

from all except those initiated a knowledge of the plants that they used as medicines. In fact one of the chief objects they had in pulverizing the herbs after drying them was to prevent others from discovering their exact nature and oftentimes they added some other article to still further obscure their identity.

After the young medical student had paid his fee he was taken into the woods and taught the names and the virtues of the useful plants. He was then instructed how to sing the medicine song and how to pray the prayers to the manidos or gods whom

the afflicted ones imagined they had offended. The second spirit or Dzhemanido was the guardian spirit of the medicine man, and he was second only to the first or the great spirit. To continue his medical education still further, the pupil had to pass through the four degrees of which we have spoken.

The membership of the grand medicine lodge was not hereditary. So closely were their secrets guarded that educated men, after great effort, could obtain but little information about them. An entrance into the lodge itself, during the ceremony, has sometimes been granted through courtesy, but those who were so introduced were by no means initiated into the mysteries of the creed nor made members of the society. These priests and priestesses constituted an order, and they were employed in all times of sickness. They occupied positions of conspicuous importance as they were supposed to have control over mysterious agencies and to be endowed with almost supernatural powers. While they were believed to be under the influence of the Great Spirit, it was also thought that they themselves had more or less control over other powers whose aid they could compel for weal or woe either upon friend or enemy. They could interpret signs of major or minor importance, could foretell the severity or mildness of approaching seasons, and pointed out the most appropriate time for the undertaking of expeditions of those engaging in war or in the chase.

These doctors, magicians, prophets, dreamers, or whatever the medicine man may be conceived to have been, were prepared then for their profession only after long and arduous training. The tests required for recognition as skilful practitioners were oftentimes severe and exacting, requiring great physical endurance and bravery of no mean order. The renown of these men sometimes spread to other tribes and nations. Young men seeking to become great prophets often travelled far for instruction by those who were great prophets.

When the prophecies of the medicine man failed the Indians attributed it to some neglect of the instructions given, and did not believe that it was due to any deficiency in the medicine man himself. When success was attained great honor was bestowed upon the prophet.

Henry writes, "Early on the 18th of May, 1801, we returned to Red River and found the Indians busy making the grand medicine ceremony that was performed by them every spring, when they met to admit some novice into the mysteries of this solemn affair."

Hoffman obtained much of his information owing to the fact that great areas of land that had been given to the Indians by the United States Government were being relinquished and the tribal ties that bound one tribe to another were broken up. The

chief Mide priests were unable to continue the ceremonies any longer and they imparted to him a complete description in order that such a description might be transcribed and preserved for the future information of their descendants.

Paul Kane, in his "Wanderings of an Artist among the Indians of North America," on one occasion saw a medicine lodge erected in the centre of their encampment, and to it he at once directed his steps. It was rather an appalling structure, composed of poles that were bound in the form of an arch with both ends forced into the ground. This long arched chamber was protected from the weather by a covering of birch bark. On entering, he found four men, who appeared to be chiefs, sitting upon mats spread upon the ground and gesticulating with great violence and keeping time to the beating of a drum. Something that was evidently of a sacred nature was covered up in the centre of the group, and he was not allowed to see it. They ceased their pow-wow, or music, and seemed displeased at his entrance. The interior of the lodge or sanctuary was hung with mats constructed of rushes, and to these mats were attached various offerings that consisted principally of beads, red and blue cloth, calico, and the scalps of enemies.

Catlin writes, "My appearance here, owing to the operations of my brush as a portrait painter, commenced a new era in the Arcana of medicine. Both chiefs then walked up to me in the most gentle manner, in turn taking me by the hand with a firm grip, with head and eyes inclined downwards and in a tone, a little above a whisper, they pronounced some words and walked off. That moment I took the degree not of Doctor of Laws, nor of Bachelor of Arts, but of Master of Arts of magic and of hocuspocus, or the degree of the great white medicine man."

But, from what has gone before, we can readily see that neither Kane nor Catlin understood much about the great medicine man or his society of the Mide-wiwin. Among the medicine men in times past there have been some who were very celebrated. One of these was a Shawnee prophet Ten-squa-te-way, who was the brother of the great chief Tecumseth, and as great a medicine man as his brother was a warrior. He was blind in his left eye. In the portrait presented he is seen to be holding in his right hand his medicine fire and in his left his sacred string of beads. With these mysteries he went through most of the western tribes and enlisted warriors to assist his brother Tecumseth in the great scheme he had formulated of establishing a confederacy of the Indians intended to defend Indian rites and drive back the whites. He failed in giving much assistance, owing to the fact that two of his enemies followed him and denounced him as an impostor or quack. This was believed against him and he sank silently into disgrace.

It was believed that medicine men were able to repel any foe to health until such time as the superior gods ordered otherwise.

La Hautau says that the *joueur* is a sort of physician, or rather a quack, who, having been once cured of some dangerous distemper, has the presumption and the folly to fancy that he is immortal and possesses the power of curing all diseases by speaking to the good and evil spirits.

Father Hennepin looked upon the medicine man as the veriest quack. He says in one place, "It is impossible to imagine the horrible howlings and strange contortions that these jugglers make of their body when they are disposing themselves to conjure or raise their enchantments. They also pretend to phisic and apply medicines that, for the most part, have little virtue in them."

"Now for medicines, or mysteries," writes Catlin, "for doctors, high priests, hocuspocus, witchcraft and animal magnetism. I spoke of "Eagle Ribs," painted in a splendid dress, holding the medicine bags of skins of otters, curiously ornamented with ermine and other strange things. Medicine here means mystery, and nothing else. Medicine bags are mystery bags. They are seldom opened, and are attached to some part of the clothing or carried in the hand. They are greatly respected, or even actually worshipped, and looked to for safety and protection."

A boy of fourteen or fifteen years of age was said to be making or forming his medicine. He wandered away from his father's lodge and absented himself for the space of two to four days. He lay on the ground in some secluded or remote spot and cried to the great spirit and fasted. The first animal, bird, or reptile of which he dreamt he regarded as chosen by the great spirit to be his mysterious protector through life. He then hunted and procured the animal and removed from it the entire skin. This he carried with him through life for good luck, and it was buried with him after death to conduct him safely to the beautiful beyond. It was a great disgrace to sell or give away a medicine bag. If lost in battle the owner lost with it the respect of the other men of the tribe until it was replaced. It could only be replaced by rushing into battle and taking the medicine bag from an enemy slain by him. The medicine thus obtained was of the very best variety.

We are told that we may imagine the Witch of Endor, or ghosts, or spirits, or furies of demonology, but that we must see a medicine man fitted out in all his strange and unaccountable coverings to form any just conception of his real frightfulness.

Certain charms were used, such as a pipe, curiously shaped stones and stuffed birds. Different medicine men evidently approached their patients in different manners. Sometimes the crouching position was taken, with a slow and halting

step; in the one hand a frightful rattle, and in the other a medicine spear or wand. Sometimes he approached in jumps and bounds, with yells and groans, and crawled like the grizzly bear whom he represented on behalf of his patient, while meantime the patient was perhaps rolling and roaring in the agonies of death. The doctor jumped over his patient, pawed about him, and rolled him around from side to side. He bellowed like a bull, or hissed like a snake. The patient had his abdomen pressed in with fists or his chest walked over.

I find an instance related of a poor Indian who was ill with dropsy and in great pain. The medicine man held his hand over the fire until it was warm, then raised it over the body of the patient and moved it about mysteriously and rapidly as if he was suffering from delirium tremens. A pipe was then lit, from which two or three whiffs were taken. The stem of the pipe was raised towards the sun and then pointed towards the earth. The smoking was carried out in honor of both the sun and the earth. Then another whiff was taken, and the smoke was blown out over the body of the patient. It was supposed to be more efficacious if the stem of the pipe was broken off and the smoke was drawn out through the broken stem. The smoke was sometimes blown into the throat to relieve sore throat, and perhaps the smoke was blown into the ear to cure earache, though I can find no mention of this fact.

When the medicine man came to the dances he brought his armamentarium with him, and these articles made quite an exhibit. The charms used were peculiar objects, with which they touched the credulous patient who believed, as some do among civilized nations, in the laying on of hands. The charms were wrapped up in cloth or buckskin and put into boxes ornamented with beads.

Kane gives us some information regarding the medicine pipe stem, and the pipe stem carrier, who was elected every four years, and was not allowed to retain the distinction beyond that period. All were eligible for the position who had the means of paying for it. The expense was very considerable, as the new-comer had to buy out the practice of his predecessor to obtain the insignia of his office, that were frequently valued at from fifteen to twenty horses. The insignia consisted of a highly ornamented skin tent, in which the pipe stem carrier was expected to reside. A bear's skin was required, upon which the pipe stem could be exposed to view when it was found necessary to take it from its manifold coverings, and it was brought forth on such occasions as the calling of a council of war or the performance of the medicine pipe stem dance. When a quarrel occurred in the tribe the medicine man was called upon to bring forth his medicine pipe stem in order that the contending parties might smoke from it.

Besides the articles already mentioned he had a medicine rattle, a wooden pail from which he took his food, and several other smaller articles. It required two horses to carry all his impedimenta when on the move. The favorite wife of the official usually carried the pipe-stem itself, and in this way was of great service to him. If, by chance, the pipe-stem fell on the ground many ceremonies were performed to bring back good luck. The carrier always sat on the right hand side of the lodge as you entered, and it was considered to be a mark of great disrespect if the visitor passed between the pipe-stem carrier and the fire. The official never condescended to cut his own meat; it was cut for him. One of his misfortunes in the presence of so many parasites was the fact that he dared not scratch his head without compromising his dignity. The pipe-stem, enclosed in all its wrappers, hung in a large bag on the outside of the lodge, and was never taken inside either by day or night, or uncovered in the presence of a woman.

In the councils of war and peace the medicine man had a seat with the chiefs, and was regularly consulted before any public step was taken, and the greatest confidence and respect was paid to his opinions. The Indian medicine man had a persistence that would have done credit to the modern doctor. He forced his attentions on the dying until, in despair, the poor sick one acquiesced in all his effusions in order that he might be rid of him. One observer says that he saw a blind man treated. He was struck on the head by the medicine man and asked if he could see. He naturally replied "No." He was again struck and asked if he could see, and by this time he had profited by his experience and said, "Oh, yes," and immediately it was considered that the medicine was all right.

The sick were sometimes trampled on, and considerable harm was done, but there were no lawyers and therefore no suits for malpractice.

A lady doctor, designated "She strikes the rider of the spotted horse," pressed her darling husband, who was sick, with her hands, and then stood on his chest and trampled on him. This was done in an endeavor to make him sick at the stomach, but, as it was not successful, it was tried again, and as a last resort a very vigorous stamp with one foot was administered. The patient gave a fearful moan as if he had been shot and life was found to be extinct, but in order to be sure of the effect, and to give him enough of the remedy, the trampling was continued. When the lady physician was finally satisfied that her husband was dead she and her lady companion in grief carried him to the burying-ground with great signs of mourning.

Another case is recorded in which the stomach of a dying patient was pressed on, in order that a snake that was supposed

to be lodged there and was gradually working towards his heart, might be killed. The medicine man was satisfied that if the snake ever reached the heart it meant sure death.

Kane says that he saw a young Indian girl, the handsomest he had beheld, in one of the lodges. In the middle of the lodge sat a medicine man with a wooden dish filled with water before him. Twelve or fifteen other men were sitting around the lodge to assist in the cure of some disease affecting the girl's side. The officiating medicine man was in a state of profuse perspiration resulting from his exertions, and he sat down completely exhausted. A younger medicine man then took his place beside the patient, and began singing and gesticulating in the most violent manner, while the others kept time by beating on poles and drums. They were singing continuously. The younger doctor now darted upon the woman and took hold of her side with his teeth and shook her for a few minutes. The patient appeared to suffer great pain. He then relinquished his hold and cried out that he had got it, at the same time holding his hands to his mouth, after which he plunged them into the water in the bowl and pretended to hold down with great difficulty the disease that he had extracted. He held up something between his thumb and finger that looked very much like a piece of cartilage. One of the Indians sharpened his knife, divided the piece in two, and held one section in either hand. The one he then threw into the water and the other into the fire, and accompanied the action with a diabolical noise that none but a medicine man can make. The poor patient seemed to be unrelieved by the violent treatment.

It was believed that by drawing the figure of any person in sand or ashes, or in clay, or by considering any object as the figure of any person, a prick of this representation with a sharp stick or other substance would cause pain or injury to the individual represented.

INDIAN MEDICINE.

Indian Materia Medica.—It is impossible to deny the fact that either by their discernment or the force of some unerring instinct, the Indians were guided to a knowledge of the good preparation of the medicinal plants that were indigenous to their respective sections of country. It was supposed that perhaps the long continued intercourse between the Indians and the Catholic Fathers, who were tolerably well versed in the ruder forms of medication, had much to do with improving an old and purely aboriginal form of practising medical magic. The whites knew but little of the materia medica of the Indians, owing to the fact that the knowledge was kept within the

ranks of the mide wiwin. It has been stated that they had no remedies of any value that were not known and embraced in the Pharmacopeia of the United States. Surely this is saying a good deal, and is one of the greatest compliments that could be paid to their powers of observation.

Strange coincidences are found to exist. Many of the botanical remedies employed by the aborigines were the same as those used by educated physicians. From a very early day it has been supposed that the aborigines were skilled in their knowledge of botanical plants. They used aromatics such as the northern mint (*Mentha Canadensis*) and field thyme (*Thymus Serpyllum*). These were added to the water in which they washed, and to the oil with which they anointed themselves. The name *Mentha* is of mythical origin. According to the fable a nymph was transformed by Proserpine, the wife of Pluto, into a plant that now bears her name. The thyme is, no doubt, of the same family as the ancient hyssop, and perhaps identical with it, for we read in the Scripture, "Purge me with hyssop and I shall be clean." But it must be presumed that this passage referred to external cleansing. Hyssop or thyme has long been used as an aromatic to improve digestion. The odor resembles that of the lemon scented melissa.

Emetics and purgatives were the chief among the drugs used by them. The purgative used by the Dacotas was the large flowering spurge or milk purslain (*Euphorbia Corollata*). This is evidently the American ipecac of the herb doctors found in western New York, in Ontario, and southwestward to Alabama and Louisiana, and west to Kansas. It possessed emetic as well as purgative properties. A small portion of the root of this was eaten and the patient was forbidden to drink. They dried and preserved the plants they collected by hanging them up in bags that were made of animal tissue.

Hygiene.—Hygienic conditions were improved by the moving of the tepee from place to place. When the Indians began to live in houses no moving took place and filth accumulated. They were fond of athletics.

When the Indian was sick he only drank broths and ate sparingly. If he had the good luck to fall asleep he thought himself cured. He believed that sleep and sweating could cure the most stubborn diseases in the world.

Epidemic Diseases.—Epidemics occurred after their contact with the whites and measles and smallpox played sad havoc among them. Mumps were met with and erysipelas occasionally appeared in an epidemic form.

Other Diseases.—They were, in general, free from such disorders as dropsy, gout, or stone, while inflammation of the lungs and rheumatism were among their most ordinary com-

plaints. Exposure to wet and cold, sleeping on the ground and inhaling the night air accounted for their liability to these diseases. White men similarly situated are prone to suffer from them.

Carbuncles were frequently met with.

Cancer was rarely found among the Indians.

Diseases of the Eye.—The Indians had strong eyes, but when he was forced to endure the glare of the sun on the snow for four or five months in the year he suffered from conjunctivitis. Tyrrell tells us that at the present day the Eskimos, in order to guard against the occurrence of snow-blindness, wear a very ingenious contrivance, in the form of wooden goggles. These are neatly carved so as to fit over the nose, and close into the sockets of the eyes. Instead of colored glasses, which the Eskimos have no means of getting, these goggles are made with narrow horizontal slits, just wide enough to allow the wearer to see through. Thus the excess of light is excluded, while the sight is not entirely obstructed. Conjunctivitis was also produced by the smoke in the lodges. Many of the Indians suffered from granular lids, but blindness was very infrequently met with.

Fevers.—Fevers were met with, but were not distinguished. As is well known, fever or elevation of temperature accompanies many diseases, and when this condition was found they gave an emetic, thinking that the stomach should be emptied in order that the nausea so frequently found at the commencement of these conditions might be relieved. The emetic used was the wild ipecac (*Euphorbia Ipecacuanha*), the boneset or the Canadian hemp (*Eupatorium Perfoliatum*). In the treatment of fevers they also relied very largely upon the use of the vapor or the cold bath. When it was not possible to give the patient a natural cold bath the wet pack was used by wrapping him in blankets and pouring cold water over him. The most common drink given to quench the thirst of fever patients was a decoction made of the root of a plant called the red root, or New Jersey tea (*Ceanothus Americanus*). The leaves of this plant were used during the American War of Independence as a substitute for Chinese tea, and in the Civil War it was employed in the same manner as a good substitute for poor black tea.

Indigestion.—Some of the Indians suffered a good deal from what was called *mal-de-boeuf*, produced by eating the meat of the buffalo bull. The meat was tough and leather like, hard to masticate, and difficult to digest. When the tongues of the buffalo were eaten this condition was not present.

Consumption.—In some places in which the evidences of tuberculosis have been found the climate is so dry that bodies laid on scaffolds, according to the burying rites, dried and dis-

integrated without the usual evils of decomposition. For the relief of consumption they gave slippery elm, or an infusion made from the mucilaginous leaves of the velvet leaf (*Abutilon Avicenna*), and also from the common mallow (*Malva Rotundifolia*). It is not necessary for me to say anything further regarding consumption among them, for its ravages have become well known.

Asthma.—Asthma was occasionally met with, and for its relief they smoked tobacco and drank decoctions of saffras and skunk cabbage.

Pleurisy.—This disease was met with. In the acute stage blood-letting was practised for its relief, and the skin was blistered with the juice of the mayweed or the wild chamomile (*Anthemis Cotula*). Internally, pleurisy root (*Asclepias Tuberosa*) was given. The pleurisy root was one of the milkweed family, the best known of which is the *Asclepias Cornuti*, or the common milkweed. The pleurisy this plant was credited to relieve was in all probability muscular rheumatism of the walls of the chest.

Dropsy.—For dropsy they gave the bark of the prickly ash (*Aralia Spinosa*), and accompanied its administration with a good hot vapor bath. The prickly ash is one of the ginseng family, the best known of which are the three-leaved and the five-leaved ginseng. The latter variety still brings a good price in China, where much of it is exported from this country.

Mental Diseases.—The Indians were peculiarly exempt from mental strain and its accompanying evils. Lunatics were met with and the tribes attempted to care for them. Insanity was not, however, very prevalent among them.

Poisons.—When it was thought that poison had been taken or administered, emetics were given to cure the sufferer. For snake bites, and the bites of venomous insects, each nation had a different treatment.

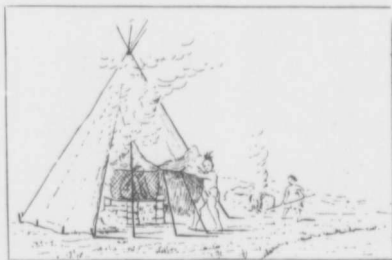
Blood-letting.—They were fond of blood-letting. Bleeding was such a favorite operation among the women that, according to Henry, they never lost an opportunity of enjoying it, whether sick or well. He says that he himself sometimes bled a dozen women in a morning as they sat in a row along a fallen tree. The operation was carried out by driving a piece of flint into the vein by giving it a sharp tap with a stick.

Cupping.—Cupping was performed by scarifying with a piece of flint. A horn was taken that had been cleaned out and perforated at the tip, and the large end placed over the scarified area. The air was then sucked out of the horn.

Steam Baths.—The steam bath seems to have been largely used. The women indulged in this luxury as much as the men. The sweating house was used by both of them as a house of prayer. They prayed loudly for themselves, and cursed their enemies.

Sometimes, in cases of sickness, the steam bath was used to very great advantage, and again in other cases it did more harm than good. In every Mandan village a crib or basket, (plate 20), made in the shape of a bath-tub was to be seen. It was constructed by weaving together willow boughs, and was sufficiently large to receive a person in the reclining or recumbent posture. It was carried by the squaw to the steam bath or sudatory, when any one was about to take a bath, and it was then brought back to the wigwam after it had been used.

The bath house was built by placing skins that were tightly sewn together over a frame-work. In the centre were two walls of stone that constituted the furnace, while across from one wall to the other were placed a number of sticks, on which the bathing crib was rested. Hot stones were brought in from a fire conveniently situated near the lodge, by the squaw, and



No. 20.

SWEAT BATH OR SUDATORY.

water was poured over them to raise a profuse steam. The lodge was now kept tightly shut, and the bather, lying on the willow crib, quaffed this delicious and enervating draught with long drawn sighs and extended nostrils until he became drenched in a profuse perspiration. At a given signal from him the lodge door was opened and he plunged headlong into the river for an instant, and then, putting his robe around him, ran home to dry himself and to sleep, wrapped up closely in his buffalo robes.

Another form of the sweat bath is described by Schoolcraft (plate 21). A hole was dug in the ground, into which stones were put. A small fire was kindled about them to heat them, and over them some sticks were placed that were fastened in the ground at each end, forming the frame-work of a miniature

tent. Over these poles a blanket was thrown, and the patient got under this tent and steamed himself by pouring water very gradually upon the hot stone heap.

Still another variety of sweat bath was in use. A log heap was burned on a selected spot. While the earth was hot an excavation was made large enough to receive the body of the patient. He was laid in this excavation with enough clothing on to absorb the perspiration. This clothing was covered over with hot earth while the head only was left out above the surface.

These sudatories were resorted to as a luxury for giving freedom and vigor to the faculties of the mind at times when deliberation and sagacity were called for, and also in sickness. If a sudatory was prepared for a guest it was an evidence that every assistance was to be given to his judgment; if the suda-



No. 21.

CROW INDIAN SWEAT TEEPEE.

tory was refused it manifested a desire to take an unfair advantage of him. Under the latter circumstances they generally offered him alcohol.

The Indians said that they took sweat baths to make them more alert in the pursuit of an animal that they desired to kill.

INDIAN SURGERY.

The ambulance or travois (plate 22). The Indian ambulance, or travois, was a remarkable conveyance used to carry the wounded, during a battle, out of the reach of harm. The comfort of this mode of conveyance was greater than would appear at first sight. With it they transported the wounded to the home camp. Litters were also made by lashing together two

poles with cross pieces and filling up the intervening space with bark. The wounded were placed upon these frames and carried off the field on the shoulders of four men.

TREATMENT OF WOUNDS.

It is said that the Indian cannot bear the loss of as much blood as the white man. The skill of the Indian in treating wounds appears to have consisted in a very close attention to the injured part, and the frequent applications of washes and poultices, and, further, to the fact that they kept the part clean. Wounds were brought together with sutures made of the inner bark of the basswood or the fibre of the long tendon taken from the leg of the deer. The sutures were left in until the sixth day, when they were removed. After this time the parts were washed with a mucilaginous decoction prepared from lichens or from slippery elm.



No. 22.

CROW INDIAN AMBULANCE OR TRAVOIS.

Alexander Henry says that, in regard to flesh wounds the Indians certainly effected some astonishing cures. The injuries inflicted were those produced by the war club, the tomahawk, the knife, and the bow and arrow, and in later years those produced by firearms.

He saw at Sault Ste. Marie a man who, as the result of a quarrel, received the stroke of an axe in his side. The blow was so violent, and the axe was driven in so deeply, that the wretch who held it could not withdraw it, but left it in the wound and fled. A medicine man arrived and took from his bag a small portion of a very white substance resembling a piece of bone. This he scraped into a little water, and, after

forcing open the jaws of the patient with a stick, he poured the mixture down his throat. The wounded man soon opened his eyes and became sick at the stomach and vomited. The medicine man now examined the wound, from which he could plainly see the breath escaping. This, no doubt, was not the breath, but was the air being drawn back and forth into the abdominal cavity. The omentum was found protruding and was cut away. The portion cut away was eaten by the men. After six days the patient was able to walk about; within a month he was quite well, except that he was troubled with a cough. He was living twenty years afterwards.

A chief was stabbed in a quarrel, and the wound was a very large one, and opened up the chest. After a very violent fit of coughing part of the lung protruded, but this protrusion acted very well and stopped the hemorrhage. The medical practitioner of the village was much puzzled, and he called another medicine man to give him advice, when it was decided to remove the protruding portion of the lung and deal with the removed portion in the usual way by eating it. After a time the portion of the lung in the opening sank back, the skin healed over, and the chief was once more restored to health.

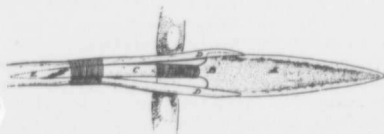
In a conflict with a grizzly bear a terrible injury was inflicted on the face. The eye was destroyed and a portion of the cheek bone removed. The other paw of the bear made two openings into the left half of the chest. When the man was discovered he was supposed to be dead. He was carried to his lodge, placed on the wounded side so that good drainage could be effected, and the wounds were faithfully washed with mucilaginous decoctions. In a few months he was well.

Gun-shot Injuries.—Gun-shot wounds were cleansed by injecting, with a quill and a bladder fastened to it to make a syringe, vegetable decoctions into them. An effort was made to keep up suppuration, and the external opening was not allowed to close prematurely. To keep the wound open it was packed with the bark of the slippery elm, which is soft and mucilaginous and makes an admirable pack. Great attention was given to these wounds, and to this fact the success was mainly due.

Arrow-heads and bullets were removed by means of an instrument that was made as follows (plate 23). A willow stick was procured and cut exactly in half by splitting it down the centre; the pith was then removed and the inside was smoothed off and the ends rounded, narrowed and pointed. One end was inserted above the arrow-head and the other below it, and then the two sticks were bound tightly together to keep them firmly secured against it. Traction was then used and the foreign body successfully removed. The piece of split willow acted like a pair of modern bullet forceps.

Trephining.—The skull has been trephined by savages for the purpose of allowing the escape of an evil spirit that could not be dislodged by ordinary exorcism. It is practised to this day by the South Sea Islanders, and by some of the Arab tribes of Algeria, but I cannot find that it was practised by the North American Indian medicine man. In America only one skull has been discovered that showed evidence of prehistoric trephining. This skull was that of one of the Incas, and was found in Peru. In the Island of Ewea, in the Loyalty group, according to Martin, nearly all of the male adults have this hole in the cranium. The operation seems to have been performed upon them for the relief of convulsions in infancy or childhood.

Fractures.—For the treatment of fractures they made splints out of the bark of trees. The bark was adapted to the limb and fastened to it to prevent any motion at the ends of the broken bone. Deformities often followed such treatment. They were evidently unacquainted with the use of extension in the treatment of fractures.



No. 23.

THE EXTRACTION OF AN ARROW HEAD.

Amputations.—The Dakotas laughed at the folly of amputation. Some of them would rather have died than to have had it done. There seems to have been a prejudice against amputation, and I cannot find that it was adopted as a practice.

Hernia.—When a hernia was found to be strangulated, nothing was done to relieve the condition. To keep up simple ruptures they applied a bandage and used compression.

Aneurism.—Aneurism was evidently a very rare disease among the Indians. I find no reference to any form of treatment adopted for the cure of aneurism.

Ulcers and Burns.—The Dakotas treated ulcers and sores by dusting on them the dry pulverized root of the butterfly weed or pleurisy root (*Asclepias Tuberosa*). In other tribes a powder made by pulverizing the root of the sweet flag (*Acorus Calamus*) was used. Poultices were often applied to ulcers and the ulcers were frequently cauterized with a red hot iron.

Burns were treated by placing over them pieces of the inner bark of some species of pine that was boiled until it was soft.

The boiling must have extracted most of the turpentine present and the substance thus applied acted as a protective.

And now in conclusion let me say that our profession is even yet bound down by the conjectures of the past and that we, like the Indian tribes, have a certain amount of fetich worship. We are gradually eliminating much that is conjectural and it will be a great step in advance when nothing that is not actually known is taught to the student of medicine. Theories should be proved and thus be made facts, or they are of little practical value. Theories may be used to pad book covers, where they serve a certain purpose, just as did the incantations and jugglery of the steam bath.

Charles Darwin is an object lesson to everyone who has matriculated in medicine. The accuracy of his observations founded his immortal greatness. He disposed of theories, not by substituting other theories for them, but by displacing them entirely, and this he accomplished by studying, by thinking out, by understanding the changes that took place in plant and animal life, so that he was able to demonstrate these changes to others who had been surfeited with the wisdom of their own theories, but who had not put into practice or else had not been endowed with sufficient powers of observation.

As a profession, we can alleviate suffering, we can assist nature, but we cannot prevent death. With our increased knowledge we can save many lives that a few years ago were lost. We can recognize disease more readily than we could a few years back, and we understand the nature of many diseases that were not understood and before many years we will understand the nature of some diseases that are not understood as yet. Physiological experiment and study of pathology are our two sheet anchors. They have already raised us far above the juggling medicine man, but we have much to rearrange. Our pharmacodynamics is almost as unscientific as that of the savage and we worry our students with a great deal that is valueless contained in our pharmaco-poeia. Their time would be spent to greater advantage in the practical study of physiology and physiological chemistry. The man who can estimate the immense benefits that will accrue to the human race from such continued progress must indeed be a great prophet.