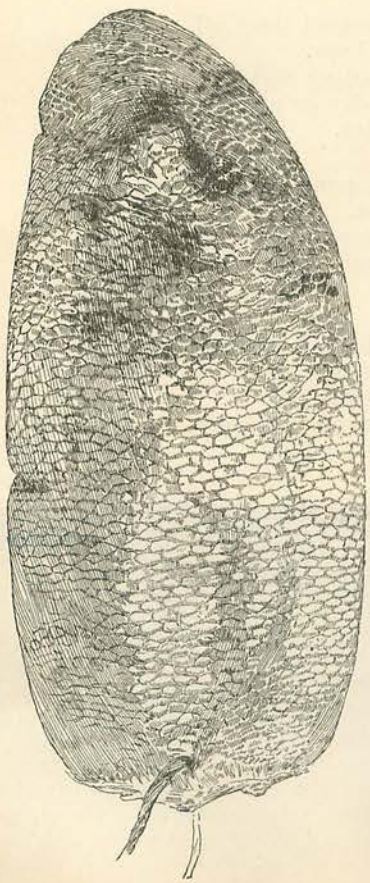
THE BEAVER.

BY H. P. WELLS.

PERHAPS no animal whose fame is so widespread is so little generally known as the beaver. Fashion has indeed made the color and texture of its fur sufficiently familiar, while innumerable picture-books have portrayed its short thick-set body and flat scale-covered tail. But in many of the popular accounts of its habits and mode of life there is a leaven of fiction and exaggeration.

It has been the good fortune of the writer for many years to have spent a portion of each year, under the guidance and tutelage of one who may be justly called a scientific trapper, among the haunts of the beaver in that wilderness of which the boundary line between Maine and Canada forms the backbone. It is proposed to give here a portion of the information so obtained.



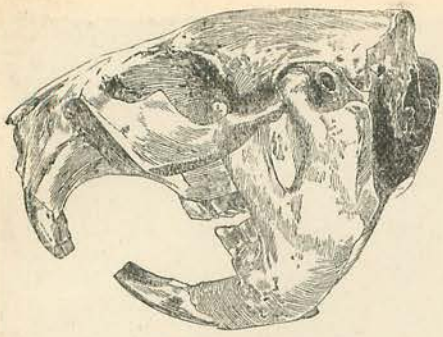
BEAVER'S TAIL.

The body of a full-grown beaver may be some thirty inches long, over one-third as wide, something less in depth, and may weigh as much as sixty pounds. The fore paws are disproportionately small. The hind feet are much larger and more powerful, are webbed to the nails like a duck's foot, and are the principal, if not the only, motive power in swimming. The feature of the animal which most attracts attention is, however, its unique tail. The specimen figured, which is of the largest, is a foot long, five inches extreme width, and half an inch thick in the middle. Jet-black in color and free from hair, it appears to be covered on both sides with scales a third of an inch and less in size. It is a muscular appendage, and is evidently for a purpose. What purpose? In the first place it may be confidently asserted that it does not, as is frequently stated, serve either as a dray-cart or mud-scow upon which to transport building material. The convexity of its upper surface unfits it for such a purpose. No more is it employed as a bricklayer employs the trowel which it so much resembles. It does serve as a rudder, and aids the animal in diving. Some think it is used in swimming as an oar is used in sculling a boat, and its articulations are such as to render this possible. But if so, it is only when the animal is altogether under water, for when swimming on the surface the tail is carried straight out behind. It is also—and this is perhaps its most important function—used as a prop to aid in sustaining its owner when erect on its hind legs, a position in which much of its labor is performed.

One use, however, the beaver does make of its tail which will make the person under whose notice it comes for the first time almost jump out of his own skin. Until the fall snows carpet the ground and render "still-hunting" practicable it is not uncommon for hunters to patrol the watercourses at night in the hope of surprising some one of the deer tribe in or near the water. He who is to do the shooting sits in the bow, while the stern is occupied by the paddler, who impels the canoe in a manner that is absolutely

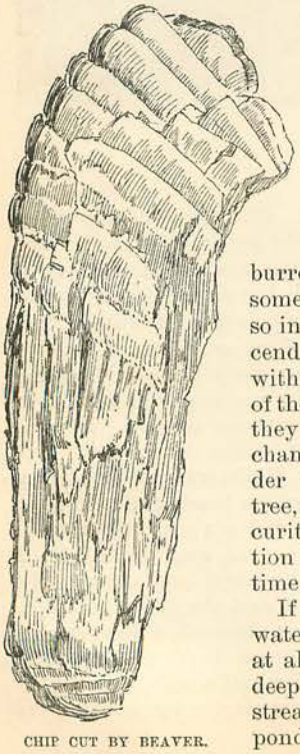
AN UNFORESEEN ENCOUNTER.

noiseless. The many sounds which at night characterize the woods on the confines of civilization are wanting in the forests of the wilderness. In the absence of wind the silence is that of death itself —like the Egyptian darkness, it seems as though it could actually be felt. And so the canoe steals slowly on, as silent as the shadow of a cloud, its occupants, their nerves at the highest tension, straining their ears to detect at the earliest possible moment the presence of the game they seek. Suddenly, without the slightest warning, the death-like silence is broken by a sound, as though the guardian angel of the deer tribe had hurled a stone about two feet in diameter into the water in the immediate vicinity of the canoe. It is the protest of the beaver against the invasion of its domain. I had heard this sound many times, and its cause had been explained to me as often. Still, though long experience had taught me implicit confidence in my companion and mentor, I could yield him in this but a half-hearted faith. It seemed incredible that an animal less than three feet long could make a noise the size of a two-story house. But one moonlight night we stole on a beaver swimming in a narrow stream. Not till the stem of the canoe was within five feet of it did it detect our presence. Then down went its head, and rounding up its back, it struck a violent blow upon the water with its tail, and vanished. I was liberally showered and thoroughly convinced at one and the same moment. When excited or alarmed, a beaver will sometimes continue this performance, easily audible for half a mile or more, at half-minute intervals, for ten consecutive minutes.



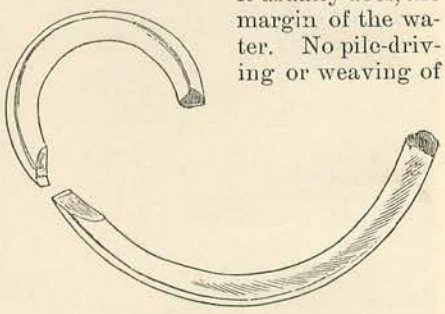
BEAVER'S SKULL.

During the summer the beavers take life rather easily. They in a measure abandon the ancestral mansion, and take up their abode in burrows in the bank. These burrows, of which there are several in every "beaver-works," as the trappers call the range of land and water occupied by a colony of beavers, open into the water at a considerable depth below the surface. Under the roots of a large tree, where the bank is nearly perpendicular, is a favorite place. If the bank is not sufficiently steep, or the water is not deep enough, so that the entrance would be below the ice in winter, they proceed to improve on nature by excavating a canal of satisfactory depth from deep water to the burrow. These burrows are usually some twelve feet or so in length, and ascend gradually to within a few inches of the surface, where they terminate in a chamber, often under the roots of a tree, so as to give security and ventilation at the same time.



CHIP CUT BY BEAVER.

If the depth of water is satisfactory at all seasons, as in deep and sluggish streams or natural ponds or lakes, beavers build no dams at all, but live in such burrows in the banks and in such houses as they construct near the water's edge. But if the stream is shallow or liable to great fluctuation, they meet the emergency by the construction of one or more dams. In the choice of the site for a dam they select a place where the water is shallow and the bottom hard. A rapid below a deep pool is usually chosen, if such is to be found. The deepest water in which I have known them to build a dam was two feet; but this was, as beaver dams go, really a colossal affair. Usually water from three or four up to six or eight inches deep is chosen. Alder brush seems to be the favorite building material, perhaps because it is so conveniently at hand, fringing, as it usually does, the margin of the water. No pile-driving or weaving of



BEAVER TEETH.

basket-work is to be found about their dams, as is currently reported. Unless they have been maintained in repair for many successive years, beaver dams resemble a narrow pile of brushwood thrown together "higgledy-piggledy," to borrow a phrase from Mother Goose. The largest poles are perhaps as thick as a man's wrist, the butt ends sticking up in the air, and the brush ends inclined toward the bottom and up-stream. On the up-stream side these branches and poles are weighted down with mud mixed with grass and small stones so as to form a solid and water-tight bank. Over this bank the surplus water escapes, sifting through the interstices of the brushwood which projects above the mud. On the down-stream side of the dam, unless it be one maintained for many generations, the brush-work is clearly exposed to view.

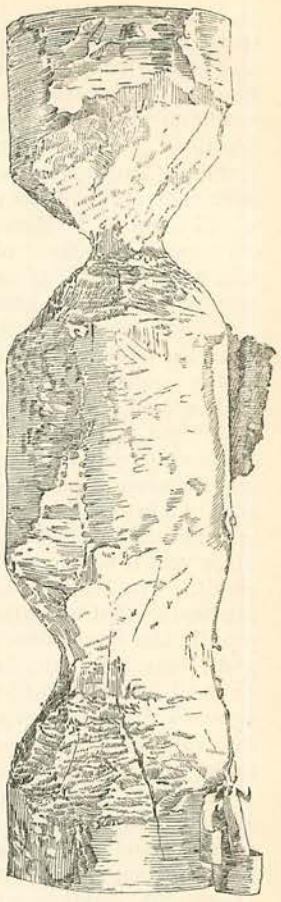
I have stood by the side of many intelligent and well-read men when they saw a "live" beaver dam for the first time, and have never failed to hear from them in any instance an expression of surprise and

disappointment at the crude character of the work before them. Not only is the construction and finish of these dams usually grossly exaggerated, but the engineering judgment often shown in the choice of a location as well.

The Little Magalloway River at one place flows over a flat sheet of rock polished by the attrition of the freshets of centuries, and drops perpendicularly some three feet into a deep dark pool below. The water flows over this smooth rock at the average height of the river in a sheet about three inches deep. Now no dam beavers could possibly make above this fall could begin to compare in depth and extent with the natural pool below, while the accessibility and quantity of food-wood on the banks would be the same in either case. Yet some eight or nine years ago they built a dam forty feet long and two feet high upon this smooth flat sheet of rock, about thirty feet above the crest of the fall. How they ever made it stand where a man could hardly maintain a footing is almost as surprising as their stupidity in building it at all; but they did. Its strong curvature of some ten feet up-stream partly accounts for this, but not for the fact that they succeeded in making the adhesion of the dam to the polished rock water-tight.

Where beavers inhabit an alder swamp, as they frequently do, they may build half a dozen or more short dams from knoll to knoll to make a pond of satisfactory size. Though these knolls may be riddled with holes by the decay of roots and other causes, though fallen trees and snags may intersect the lines of the dams at any and every angle, they plug the one and build around the other till all leakage is stopped.

Nor do they always seem to foresee the result of their labor. The great dam heretofore alluded to is a case in point. It was located on a branch of Arnold's River, in Canada, where the stream was about twenty feet wide and two feet deep, and was the most extensive, the best built, and erected in deeper water than any other beaver dam I have ever seen. This dam was seven feet high, rising five feet above the pool below. It seemed to be built principally of alder poles well limbed off, and placed, roughly speaking, side by side, their length coinciding with the direction of the current. The down-stream ends of the poles were laid moderately even with one another. This made the lower face of the dam approximately perpendicular, and gave it a finished appearance almost unique. A dam which would raise the water about three feet could have been put in here without difficulty, and would have given the beavers a much better pond than usually contents them. But this colony was ambitious, and paid the penalty of ambition. As they raised their dam the water overflowed the banks and escaped around the ends of the dam into the stream below. They then extended their dam laterally to meet the emergency, and this went on till the dam reached a length of nearly or quite a quarter of a mile. It should be stated that these extensions seldom exceeded two feet, and in many places were hardly six inches, in height.



BIRCH LOG CUT BY BEAVER.

The average beaver dam (at least through that section of the country) is from twenty to thirty feet long, raises the water about two feet, and has the crude and slatternly appearance, so to speak, indicated above. Particularly is this the case when, as is their habit, one family erects a number of dams one above the other on some narrow stream, each dam flowing the water back to the foot of that above it.

How these dams are built — whether one plans and "bosses the job," allotting the work and directing by whom and how it is to be done; or whether each works under its own direction and impulse, a common instinct giving a com-

mon result; whether they co-operate or work independently; how they begin and how they finish—is believed to be unknown. The investigation of this interesting question is hedged about with difficulties. Beavers work only at night, accomplishing three times more during a dark rainy night than under the light of a full moon. It seems as though with darkness came a sense of personal security which enabled them to devote every energy to the work in hand.

Though, as is the case with many animals, the eyesight of the beaver is by no means acute, yet nature has endowed it with a keenness of nose and ear which more than makes good the deficiency. It is a simple matter, in the gray of the evening, on some moonlight night, to tear a hole in a beaver dam, and await the result in concealment. It has been done many times, and it is believed with one uniform result. The beavers, apprised by the falling water that something is wrong, approach the dam intent on investigation and repair. But the fact that something unusual has happened makes them suspicious to the last degree, and they detect the watcher, and retreat before a step is taken to satisfy his curiosity.

The great geological age of the beaver and the absence from its brain of those convolutions the complexity of which is generally supposed to measure mental development, together with its conduct in those cases in which it has been raised from early infancy in captivity, would seem to indicate that its apparent engineering skill and enterprise are rather instinctive than a manifestation of reasoning power.

During the summer the beavers live in a rather hand-to-mouth way, almost their only systematic work being the construction and repair of their dams. The bark of the willow, poplar, and birch forms their principal food, though this is varied to some extent by roots and grass. Not unfrequently on some gravel bar in a river may be seen a hundred or more little sticks, about the size and length of an ordinary lead-pencil, all freshly peeled—the remains of some beaver's nocturnal feast. In the locality in which my observations have been principally made, white birch is the most abundant and therefore the most common of their bark foods. It is the inner, not the outer paper-like bark, upon which they feed. To obtain this, no tree is too large for them to fell.

The most skilled tool-maker, he who devises and constructs special tools by which an entire sewing-machine may be produced at an expense which would hardly have covered the cost of its screws forty years ago, cannot devise a tool better adapted to its purpose than the tooth of the beaver. The outer surface consists of a thin scale of hard enamel, while the body of the tooth is composed of softer dentine. Use, of course, wears the softer material much more than the hard enamel. The end of the tooth takes, in consequence, a chisel-like bevel, leaving a thin slightly projecting cutting edge of hard enamel, as sharp as any carpenter's chisel when fresh from the oil-stone. The thin scale of enamel gives keenness, the softer dentine strength, and the combination results in that anomaly—a tool which sharpens itself by use. Like the tusk of the elephant, the cutting teeth of the beaver are hollow at the base, and the nutritive pulp which fills this hollow keeps them in constant growth. A glance at the illustration shows their extraordinary length. When in the jaw, the upper teeth, curved almost into a semicircle, project seven-eighths of an inch beyond the bone, and have three and a half inches imbedded within the socket, while the lower teeth would show one and a quarter inches without the jaw, and five and a half inches therein—all measured on the convex side.

From the size and structure of the teeth, and from the massive character of the bones from which they project, we should anticipate results of a rather more substantial character than those produced by the gnawing of the common house rat, and such is the case. The stump of a white-birch tree fifteen inches in diameter was measured by me during the September of 1887, which had been felled by beavers late in 1886. The chips they had cut during the process still lay upon the ground. The smallest were about one inch square and about one-sixteenth of an inch thick, while many were two and a half inches long, an inch wide, and a quarter of an inch thick. The illustration given on page 230 shows one of these chips of the natural size. Upon the ground lay the prostrate trunk. The bark had been eaten from the upper surface and the sides, but was left underneath where not conveniently accessible. The limbs, to the size of a man's upper

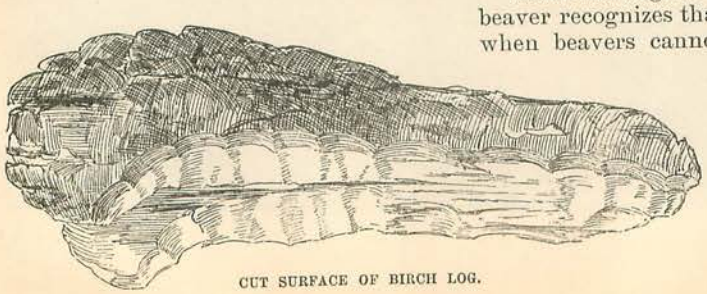
BEAVER DAM.

arm, had been lopped off, conveyed to the water, some thirty feet distant, and floated down to their habitation. This is their practice when a tree is felled so as to fall on land, and is too large to cut into billets which they can remove. But if felled into the water they usually take the whole tree, unless very large. No professional lumberman better understands the cardinal principles of conveying crude lumber to market, that water transportation alone is available, and that it never pays to move logs uphill.

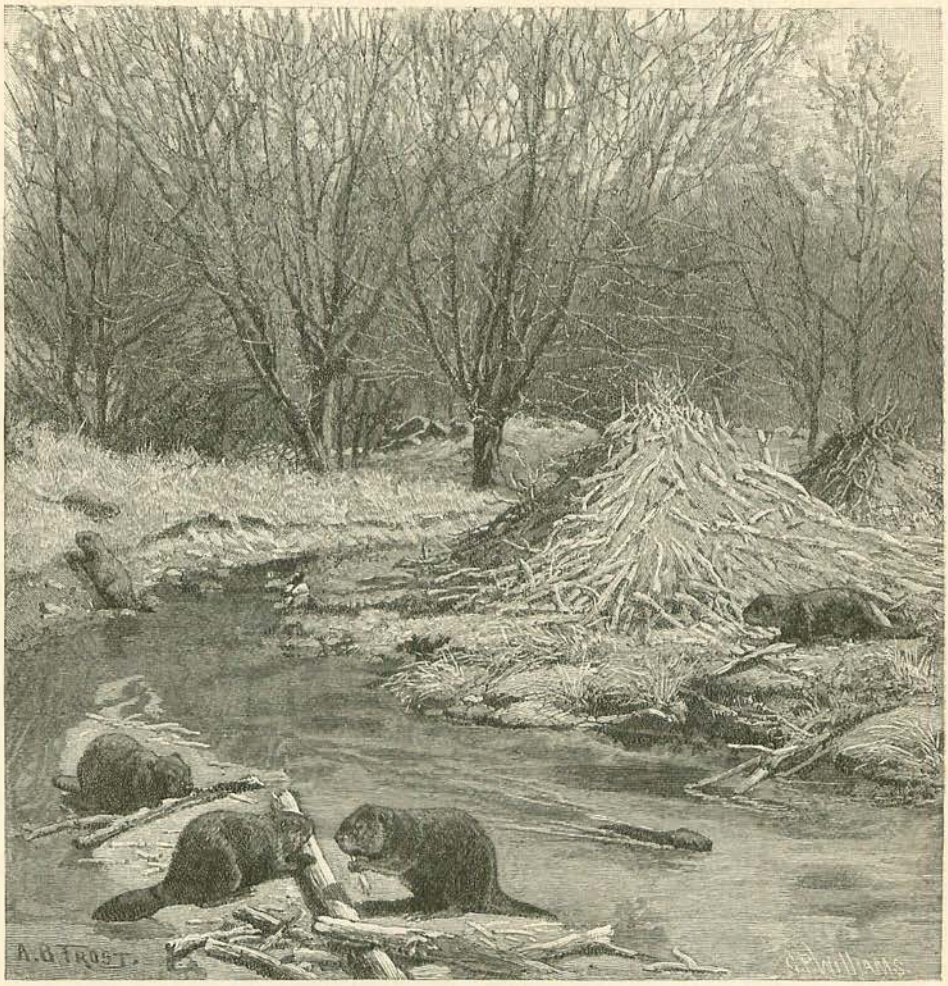
The billet figured came from the same beaver-works. It is but a portion sawn from the original log, is of white birch, and is six inches in diameter and twenty-four inches long. In our illustration on page 231 we have presented it in an upright position, in which, if broken off at the narrow neck, it correctly represents the appearance of the stump of the fifteen-inch birch-tree alluded to above, or of any other tree felled by beavers, for that matter. But branches and bushes, up to, say, one and a quarter inches in diameter, are usually cut entirely from one side, so that the cut end is diagonal to the length of the branch. Not unfrequently they will cut a five or six inch log almost through at intervals of a foot or less, so that it looks like a number of oblong beads strung on a pole, and then abandon the work without completely detaching any portion. The trappers think they do this to wear down their teeth and keep them at a convenient length. But, however that may be, they certainly seem to revel in this kind of labor, oftentimes with a very improvident eye to the future. On a different branch of Arnold's River from that heretofore alluded to a colony of beavers established themselves in 1884. Enough white birch grew in their immediate neighborhood to last them for ten years. They cut every stick of it during the first season of their residence, so that next year they were forced to move elsewhere to find food.

The operations of tame beavers have shown that they move smaller limbs by seizing them with the teeth, throwing the free end over their shoulder, and thus dragging them to the water. Billets too large for this they push and roll before them. In the water they convey them in substantially the same manner. They rely, however, mainly on water transportation. To facilitate this they enter upon another phase of engineering labor not less astonishing than their tree-cutting and dam-building. This is canal-digging. From one pond to another, across narrow necks of land bounded on either side by the bend of a river, and from their ponds to a high land where their food timber is obtained, they not unfrequently excavate canals, usually three feet or so in width, having a water depth of eighteen inches to two feet, and sometimes two hundred feet or more in length. As every particle of earth must be carried during removal between their fore paws and chin, the amount of labor involved must be enormous, and "to work like a beaver" must be admitted to be an expression of force. It is not so easy to determine what is and what is not a beaver canal. Straightness in direction and perpendicularity of bank are grounds for suspicion. But not unless severed roots and other marks of beaver-cutting are found is this conclusive; for beaver-cutting, once seen, can never be mistaken. Owing to the convex outer surface of their cutting teeth, they leave the surface operated on as though it had been scored in many directions by two slightly convex gouges held side by side, each about a quarter of an inch wide. A glance at the accompanying illustration, which is a small portion of the cut surface of the log shown on page 231, natural size, will make this plain.

When ice begins to form at night the beaver recognizes that winter is at hand, when beavers cannot work. Then, redoubling their exertions, they devote themselves to laying in their winter stock of food-wood. This they deposit in some deep hole near their house. Some, fond of mar



CUT SURFACE OF BIRCH LOG.



BEAVER HOUSES.

vels, think by some mysterious process they water-log the wood so that it sinks of itself. But the real explanation is probably much more simple. They float down the wood, well limbed off and in pieces as large as they can manage, to the chosen locality, and leave it. Additions are made by pushing them in from below or piling them on top until the summit of the pile is high enough above the surface of the water to weigh that part below to the bottom. As that portion of the pile above the surface, as well as what is frozen in by the ice, is lost to them, and as the arrangement entailing this loss is an invariable characteristic of these wood-piles, it seems reasonable to conclude that the seemingly waste part of their labor is really necessary, and has for its object to sink the available portion of the pile to the bottom, so that it will remain below the ice level. A family of four beavers will put in a store of food-wood irregularly circular in contour, ten to twelve feet in diameter, four or five feet high, with substantially perpendicular sides, and sufficiently compact to bear a man's weight.

At the same time they repair their houses, in which they fondly hope to pass the winter in blissful idleness and repose, their only labor to bring food-wood into their dining-room, eat the bark, and carry away the waste portion.

On some bank or island but five or six inches above the water they place together a number of poles in such a manner as to form a wigwam. Upon these they pile shorter sticks, largely the relics of past feasts, and mingle with them mud and grass, until they have covered the original poles to a thickness of two or more feet. Over the whole they pile more poles, until the general aspect of the finished house is that of a low dome-shaped pile of old brushwood.

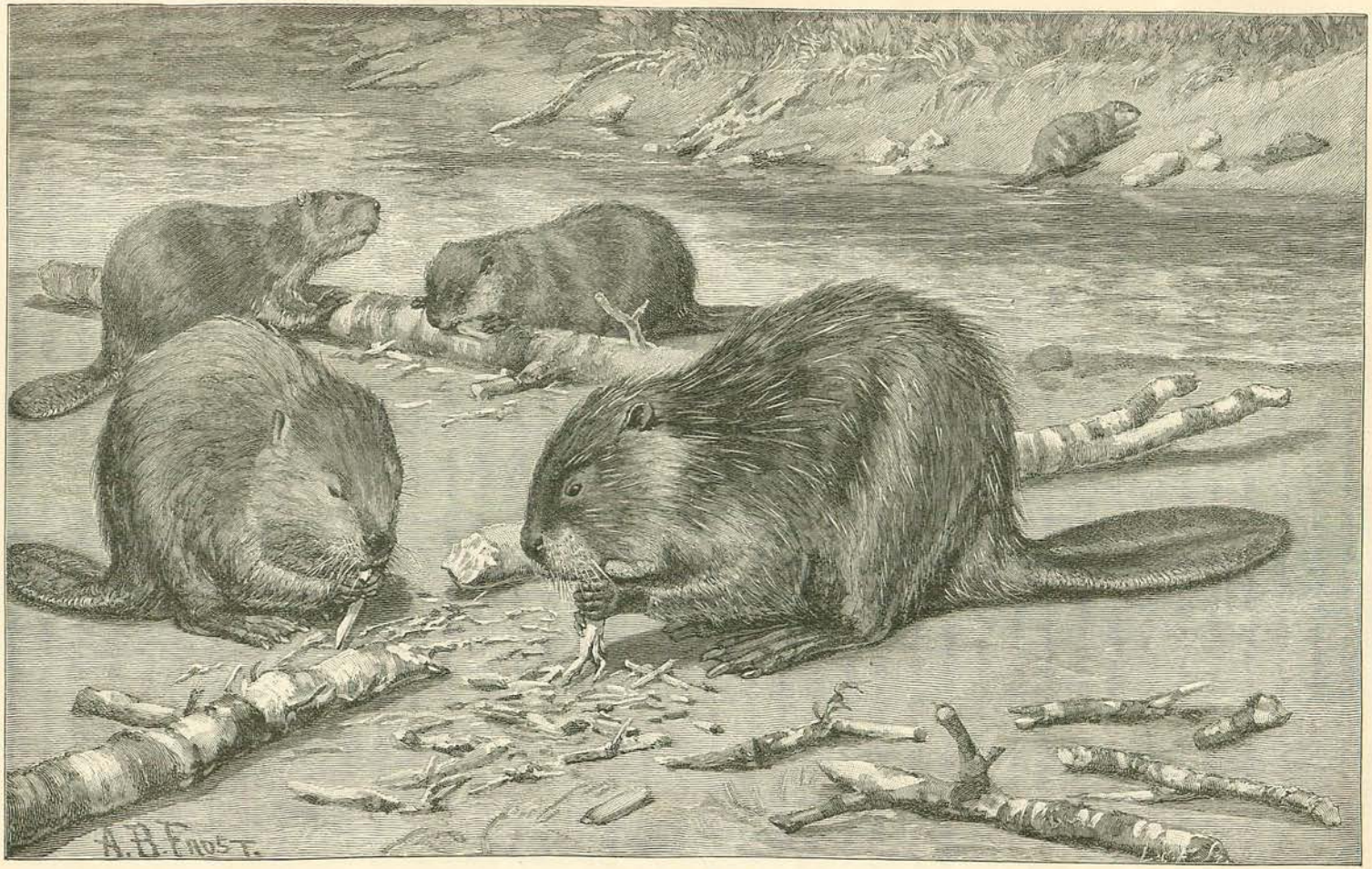
One built by a family of four in 1886, and opened by me in September, 1887, was irregularly circular, eight or nine feet in diameter, and four feet high. The living-chamber was four and a half feet long, three feet wide, and eighteen inches high. The grass beds of the family were easily distinguishable, the father at one end, the mother at one side, and the two young opposite. In the middle was the dining-room. Two holes led into the water, which was but a few inches below the floor of the chamber, opening far below the surface, one on one side, the other on the opposite side, of the island upon which the house was built. The exit toward the wood-pile was straighter and of easier grade than the other, obviously to facilitate the transportation of their food-wood. A small space at the apex of the dome consisted merely of interlaced poles and sticks without admixture of mud, clearly for the purpose of ventilation. Such is the winter home of the beaver, and to it they confine themselves as long as the weather is severe. But should a thaw come, they will burrow to the surface through four or five feet of snow, and work as only beavers can work while it lasts, laying in fresh food-wood.

Some account of how beavers are trapped may not be amiss in this connection. To describe those ruthless methods in vogue in some fur-producing countries, such as first imprisoning the luckless animals within their lodges or burrows, and then digging them out, is not my purpose. Nor is it worth while to more than touch on the methods of the unskilful, such as placing a trap on the up-stream side of the well-marked path by which the beavers cross their dam, or such as excluding all entrance to their lodges except between rows of stakes, and placing traps in the passageways so formed. But the higher phases of the art, where man pits his cunning fairly against that of the beaver—and to the victor in the contest go the spoils—cruel though they be, are at least of interest.

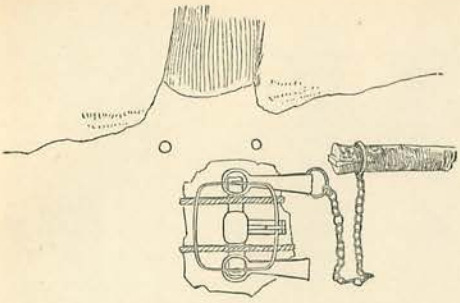
There are many who trap, but the number of trappers, proficient trappers, is few. It is a life of unremitting toil, hardship, and bitter disappointment, the kicks in which outnumber the halfpence five to one. Were the money to be earned the sole inducement, few indeed would give so much for so inadequate a return. But there is a fascination about the pursuit, the same fascination that binds the gambler to the gaming-table, and this, in the one case as in the other, overrides every prudential consideration.

During the summer and early fall, while roving through the woods and paddling over the watercourses within his trapping range, the trapper has located every family of beaver it contains. Until well into November he leaves them in undisturbed peace, for not till then will their fur be strictly "prime." He then opens the campaign. He first studies the field of their operations with the keenest scrutiny. The teeth of no two beavers leave exactly the same marks: some cut wider, some cut narrower, while others may be slightly nicked on some part of the cutting edge. Reasoning from these and other seemingly unimportant effects back to their causes, the real trapper soon informs himself just how many beavers make up the family, and their respective sizes. Not until this investigation is complete does he think of putting in a trap. To take all the old ones, yet let the undergrown go free until another year, is his object, and his success will depend altogether upon the correctness of the conclusions he has drawn from the facts he has observed. The father of the family is to be the first victim. He is the brains of the colony. Remove him, and the rest fall a comparatively easy prey. Fail to get him first, and the whole family vanish under his leadership. As he is larger and stronger, so he is more enterprising, and his range is apt to be farther afield than that of any other of the family.

Having discovered where the beaver he is after is in the habit of working at the time—and it may be half a mile from the house and dam—he turns his attention to it. Now beavers, like other timid animals, when leaving a place of safety, which is to them the water, for a place of peril, which is to them the land, always prefer



BEAVERS AT WORK.



GROUND-PLAN OF BEAVER TRAP.

a tried path. They may return to the water by several different ways, as convenience may dictate, but to their work on land they continue to follow the path that first led them into that locality. This consequently becomes well worn and readily distinguishable. Having learned from his examination that the beaver he wishes to take has worked there the night before, and will probably return, at all events in a night or two, he next determines by which leg he will take it, and on which side. He is influenced in his decision by several considerations. If taken by the hind leg, the beaver seldom escapes. But, until death from exhaustion or the club of the trapper overtakes it, it will spend the most of its time on the bank, a prey to any roving carnivorous animal which may scent it out. Should this happen, the fur is of course lost. On the other hand, if the trap is set for the foreleg, unless the beaver is promptly drowned, it will wrench and twist upon the trap until the bone is first broken, and then the leg is actually pulled out by the roots, leaving strings of sinew and small muscles, sometimes six inches long, projecting above the jaws of the trap.

If the bank breaks off quite suddenly into deep water, the trapper sets his trap for the forefoot. His engine of destruction is a steel-trap operated by two powerful springs, the jaws of which are about seven inches long. They are a most efficient device. Some three feet of stout chain, terminating in an iron ring, is attached to the trap.

The trapper first provides himself with a dry pole about eight feet long, preferably of spruce, called a "tally-pole." It must be of dry wood, or the beaver will cut it if it can, and carry off the trap. He splits the end of this, inserts it through the trap ring, and drives in a wedge or two, so that the ring is a fixture on the pole. He next binds his trap to a flat stone "about the size of a teakettle," opens the jaws, and arranges the "trencher," as the pan is called, pressure on which springs the trap.

He next excavates a depression below the water to receive the stone and trap, of such depth that the trap, when the jaws are open, will lie about four inches below the surface. The jaws of the trap are so placed that their length coincides with the direction of the beaver path, for if set transversely they may merely throw the animal upward when the trap springs, and fail to secure any hold beyond a savage but temporary pinch. The depth of water over the trap determines whether the animal is to be taken by the fore or hind leg. Whether the right or left of these is to be the sufferer depends upon which side of the beaver path the trap is located. It should be so placed that one or the other side of the path is in line with the middle of the trap; or, in other words, so that one half of the trap lies within and the other half lies without the prolongation of the path under the water. The trapper then fishes up two old water-logged sticks from the bed of the pond or stream, and thrusts them into the bottom between the trap and the bank so that they will stand upright. One stick stands on a line with the middle of the trap, the other on a line with the farther side of the beaver path. The direct route to the beginning of the beaver path lies between these upright sticks.

Trap and sticks being in place, the tally-pole is moved in parallel with the bank and lightly anchored below the surface of the water; the trap is then ready for business.

Now, like inanimate matter, man and other animals move in the line of least resistance, unless some special object induces them at the moment to vary from that course. This is the cardinal principle of trapping, and the little upright sticks are its application. The beaver approaches its familiar landing-place, swimming, its forefeet doubled back against its breast. Either it must pass between the two little sticks, or make a detour and squirm around them to reach its customary exit from the water. But the sticks are old water-logged stuff such as it encounters nightly projecting above the bottom in every ten feet of its watery domain.

SETTING A BEAVER TRAP.

It passes between them without hesitation till its breast touches the bank. Then down goes its forelegs, that one on the trap side of the path directly between the jaws. The trap manifests itself at once. Instantly the beaver darts for its usual refuge—deep water—carrying trap, stone, and tally-pole with it. There the stone sinks and drowns it, while the free end of the tally-pole, floating upward, buoys the spot where rest its mortal remains.

To take a beaver by the hind leg the arrangement is substantially the same, except that the trap is placed fourteen inches below the surface, and about eighteen inches from where the water is two inches deep; also the stone is omitted, and the tally-pole is made fast by a flexible connection, such as a thong or rope, to a stake so driven that its top is well below the surface of the water. These methods of trapping of course end when the streams and ponds become frozen.

The trapper then proceeds as follows: He cuts in the neighboring forest the nicest stick of food-wood he can find, of a length to considerably exceed the depth of the pool in which the beavers have stored their winter's wood, and as large in diameter as he can conveniently shoulder and carry. He then proceeds to that pool, cuts a hole through the ice near the food pile, and thrusts the fresh stick he has brought through the hole in such a manner that it stands upright, one end somewhat imbedded in the bottom, the other end projecting above the ice. He then sets his trap and lowers it through the water by the tally-pole, until it rests on the bottom about eighteen inches from the fresh stick. He then covers the hole with sticks and fir boughs so as to exclude wind and snow, in order that the ice, which at once begins to form on the exposed water, may freeze perfectly clear. For upon it he relies not only to firmly hold the fresh stick and the tally-pole in place, but also to serve as a window through which he can at any time inspect the condition of his trap. When the hole is well frozen over, as it soon is, he banks snow over the fir boughs, so that it may be as dark there as elsewhere. Now beaver wood is not improved by age and water soaking. They speedily notice the so much better flavored contribution of the trapper, and endeavor to cut it off as high above the bottom as they can reach. In so doing they rise upon their hind legs, and work around the stick in a circle. Before the job is complete they are sure to step upon the trap, which closes on the intruding member at once. As the trap holds the beaver, the chain holds the trap, the tally-pole holds the chain, and the ice holds the tally-pole, the beaver is speedily drowned. The trapper, on his next round, removes the snow and fir boughs, looks through the clear ice, sees what has taken place, recuts the hole and draws out the dead beaver, and resets his trap in the same way for another.

JUPITER LIGHTS.

BY CONSTANCE FENIMORE WOOLSON.

I.

"IT'S extraordinary navigation, certainly," said Miss Bruce.

"Oh, mem, if you please, isn't it better than the hother?" answered Meadows, respectfully.

Meadows was Miss Bruce's maid; one could have told that she was English (even if one had not heard her speak) from her fresh rosy complexion, her smooth hair put plainly and primly back from her forehead, her stiff-backed figure with its elbows out, and her large, thick-soled boots.

"I don't mind being 'umped up hon the bank, miss, if you please," she went on in her sweet voice, dropping her h's (and adding them too) in unexpected places. "It's those great waves we 'ad last week, mem, if you please, that seemed so horful."

"I am sorry you will have to encounter them again so soon," Miss Bruce answered, kindly.

For Meadows was to return to England immediately; she was accompanying the American lady for the journey only. Miss Bruce was not rich; in her own land she did not intend to give herself the luxury of a lady's-maid—an indulgence more unusual in the great Republic (at least the northern half of it) than fine clothes, finer houses, or the finest diamonds.

The little steam-boat which carried these