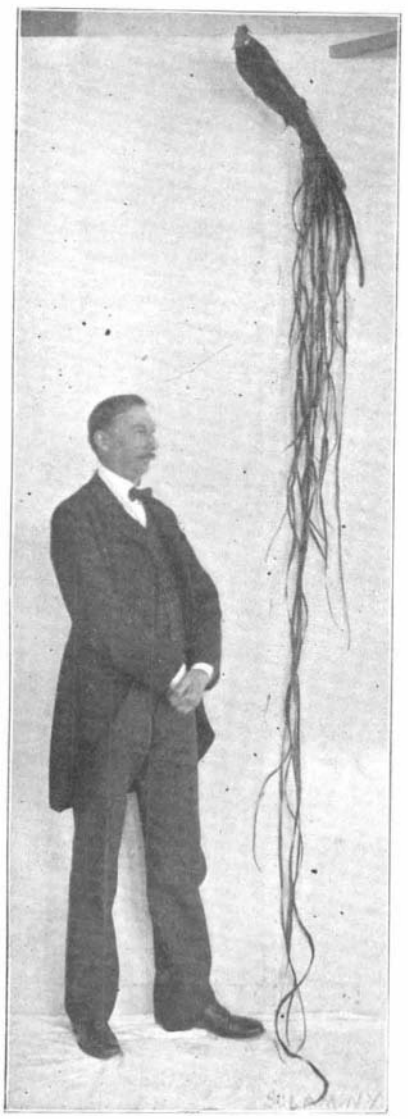
A LONG-TAILED BREED OF JAPANESE FOWLS.

BY WALTER L. BEASLEY.

The first specimen of the remarkable long-tailed breed of fowls from Japan to be seen in this country was recently received at the American Museum of Natural History. The magnificent tail feathers of this creature measure nearly 12 feet, and are strikingly set forth in comparison with the 6-foot figure shown in accompanying illustration. Mr. John Rowley, the taxidermist of the institution, will mount the new acquisition in a characteristic attitude, after which it will be installed in Bird Hall, where it will form one of the most interesting exhibits of that department. Prof. Bashford, Dean of Columbia University, last year visited the locality of the long-tailed fowls and had one grown for the Museum.



A LONG-TAILED JAPANESE HEN.

The introduction of the breed is said to have been brought about by a prince of Japan, whose imperial crest was a feather. Yearly he offered a prize to the subject who would bring to him the longest feather. The greatest effort and skill were therefore employed by the breeders to produce the greatest length of tail feathers possible. At present only a few old fanciers know the secret process of successfully breeding these fowls. A few authentic details have, however, been obtained in regard to the method of their breeding. The particular breed is confined to the region in and around Kochi, the capital of a province of Tasso. The breed is about a hundred years old and is fast dying out. There is said to be no artificial method of making the feathers grow. All is done by selection. Moreover one must know how to treat the birds during the various stages of tail growth. The body feathers springing from the shoulders attain a length of four feet. Two years is the time necessary to produce a full growth of tail. The tail feathers grow from four to seven inches a month. and continue to increase as long as the bird lives. which is usually from eight to ten years. The hens lay about thirty eggs in the spring and autumn, which are hatched by other fowl. The hens are kept housed up and sit all day on a flat perch, and are taken out only once in two days and allowed to walk half an hour or so. a man holding up the tails to prevent them from being torn or soiled. The birds are fed on unhulled rice and greens, and secret food known and prepared by the old fanciers themselves. They demand plenty of water and are wonderfully tame. The ordinary number of long-tail feathers possessed by each bird is fifteen or sixteen. About twice a month they are carefully washed in warm water, and afterward dried on some high place. usually a roof. The present price is $50 for a bird having a tail over 10 feet long. There are four varieties of the breed: White head and body feathers and tail black; second, white all over with yellow legs; third, red neck and body feathers; fourth, reddish color mixed with white on body. All these, with the exception of the second variety, have black tail feathers.

SALVAGE OF THE SCHOONER "MINNIE A. CAINE."

BY JAMES G. M'CURDY.

During the fierce gale that swept over the Puget Sound region Christmas Day, 1901, the four-masted wooden schooner "Minnie A. Caine" was cut loose by the tug that was endeavoring to tow her from Victoria, B. C., to Chemanius. Left to herself, and having every stitch of canvas blown away, during the night the vessel was driven ashore upon the rocky beach at Smith Island, lying at the eastern extremity of the Strait of Juan de Fuca.

The schooner struck at extreme high tide, and being light, she ran far up on the level beach. When morning dawned the craft was high and dry and those aboard had simply to descend the ship's ladder to the beach, where they were hospitably received by the government light-house keeper.

The "Caine" was a new vessel of 780 tons, and the insurance companies and uninsured owners were loath to regard her as a total loss. Although the vessel was not badly injured, the long distance she would have to be moved over the rock-strewn beach, and her exposure to the full sweep of fierce westerly winds, made the question of her salvage a very difficult one. The bids offered for her release were all considered too high, and in consequence those interested determined to attempt to float the craft themselves.

Operations were commenced in February, 1902, the plan of salvage being to raise the vessel above the level of the beach and force her seaward along a track of heavy timbers or "skids," by the use of hydraulic jack-screws.

A gang of laborers was put at work clearing away the sand from the schooner's hull, while heavy timbers, hydraulic jacks, blocks, tackle and other wrecking paraphernalia were brought to the scene. A cook house and lodgings for the workmen had to be constructed, and all the fresh water used had to be brought from Port Townsend on scows, a distance of 14 miles. The isolated position of the wreck added not a little to the difficulties of the task in hand.

As soon as the sand had been sufficiently removed, supports for the jacks were built up of blocking. Cleats nailed to the vessel's hull sustained the upward lift of the hydraulic screws. When the schooner had been raised some distance from her sandy bed, it was found that the sharp bowlders had cut through the hull in several places, and that the keel was splintered and broken.

The holes were covered over with planking and rows of heavy timbers were placed beneath the keel. Then the bowlders lying to seaward were shattered by dynamite and removed, and the skidding continued for a considerable distance down the beach. By careful manipulation of the jacks, the vessel was shoved seaward about 45 feet along the improvised ways. In order to take advantage of low tides, all work had to be done at night.

Thus far the weather had been favorable, but now, when a few days more would have seen the schooner afloat, a gale sprang up from the westward, and in a few hours the heavy sea had destroyed all that weeks of weary work had accomplished.

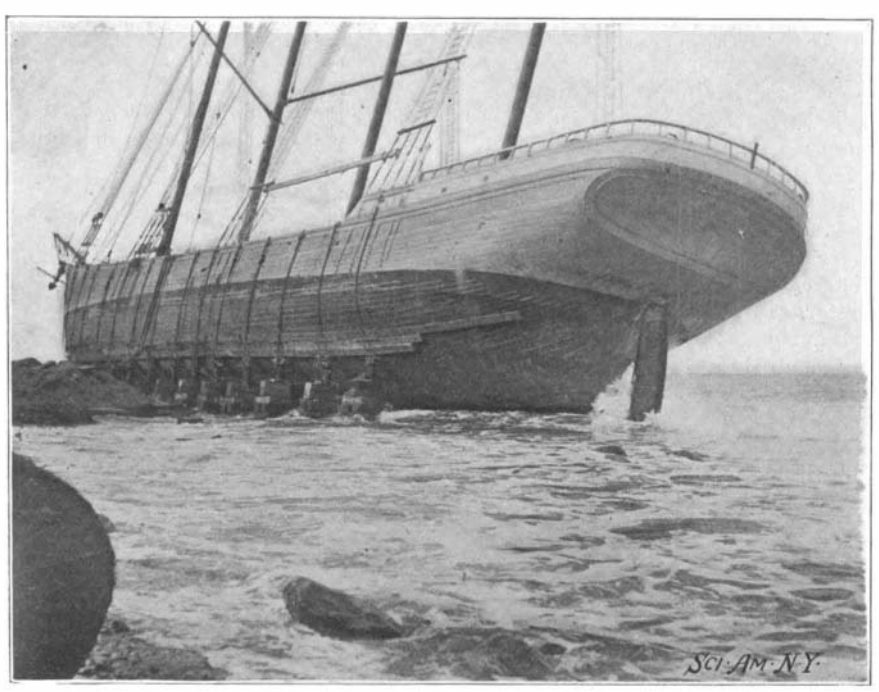
The skidding was washed out and the vessel was thrown back upon the beach. Then came a period of about six weeks when the tides were not low enough to permit of any work being done.

In April operations were resumed. Ebb tide now occurred in the daytime, allowing the work to be carried on much more expeditiously. The skidding was replaced, the jacks were put into position and soon the ship was got moving down the pathway toward the sea for the second time. Before long, however, another violent wind came on and the timber work was again torn out; but the vessel was held to her new position by the use of heavy anchors.

During the ebb tide men were kept shoveling sand from about her hull, while at the flood the winches aboard the schooner were kept straining at the wire cables made fast to the anchors planted to seaward. A tug-boat was called and took several pulls at the stranded vessel, but could not budge her.

Two powerful tugs were next engaged to be on hand May 10, to take advantage of one of the highest tides of the year and make a supreme effort toward floating the craft. Meanwhile the winches were kept going constantly, fighting for every inch of cable that the four-fold purchase would yield.

Finally, on the evening of May 9, the steady pressure told, and the "Caine" slid back into her native element, after being a prisoner for nearly five months. One of the waiting tugs took her in tow and hurried her to Moran's drydock at Seattle, where she will receive a complete overhauling. The salvage operations cost in round numbers $20,000 and the repair bill will amount to at least $10,000 more. But as the vessel had cost $65,000 the year before, her owners were well satisfied with the outcome of their efforts.

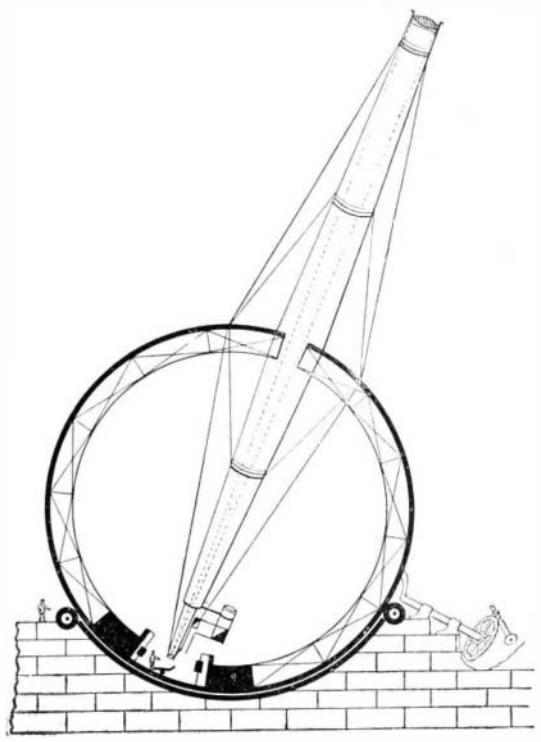


WRECKED SCHOONER "CAINE;" SHOWING LINE OF HYDRAULIC JACKS BY WHICH SHE WAS LIFTED FOR INSERTING LAUNCHING WAYS.

PLANS FOR A GREAT TELESCOPE.

BY MARY PROCTOR.

Prof. Todd, of Amherst College Observatory, has devised an ingenious plan for constructing a telescope. on the model of a gigantic eye, 100 feet in diameter,



PROF. TODD'S PLAN FOR A TELESCOPE.

with a pupil represented by an object-glass 5 feet wide. A tube 200 feet in length, occupying the position shown in the illustration, is designed to extend 100 feet beyond the exterior of the sphere. The focus of the telescope falls on the interior of the sphere, at the point where the retina of the eye is located, and here the eye-pieces, spectroscopes, and photographic cameras are to be placed under the control of the observer. The entire sphere is to be floated in a zonal basin constructed within brick or stone masonry, about 25 feet in depth and from 100 to 120 feet square. By this means the utmost ease of motion may be acquired in directing the sphere.

In order that the observer may enter the sphere, the tube must be placed in a nearly horizontal position, the observer entering through a door in the tube, at a point close to the sphere itself. He then walks along a pathway leading to the adjustable platform, where the eye-pieces and other accessories are stationed. This platform is delicately poised by means of weights which are so adjusted, that if additional