

CHAPTER XI

Winter -- Felling Wood -- The Mill -- Pencroft's fixed Idea
-- The Bones -- To what Use an Albatross may be put -- Fuel
for the Future -- Top and Jup -- Storms -- Damage to the
Poultry-yard -- Excursion to the Marsh -- Cyrus Harding alone
-- Exploring the Well

Winter arrived with the month of June, which is the December of the northern zones, and the great business was the making of warm and solid clothing.

The musmons in the corral had been stripped of their wool, and this precious textile material was now to be transformed into stuff.

Of course Cyrus Harding, having at his disposal neither carders, combers, polishers, stretchers, twistors, mule-jenny, nor self-acting machine to spin the wool, nor loom to weave it, was obliged to proceed in a simpler way, so as to do without spinning and weaving. And indeed he proposed to make use of the property which the filaments of wool possess when subjected to a powerful pressure of mixing together, and of manufacturing by this simple process the material called felt. This felt could then be obtained by a simple operation which, if it diminished the flexibility of the stuff, increased its power of retaining heat in proportion. Now the wool furnished by the musmons was composed of very short hairs, and was in a good condition to be

felted.

The engineer, aided by his companions, including Pencroft, who was once more obliged to leave his boat, commenced the preliminary operations, the object of which was to rid the wool of that fat and oily substance with which it is impregnated, and which is called grease. This cleaning was done in vats filled with water, which was maintained at the temperature of seventy degrees, and in which the wool was soaked for four-and-twenty hours; it was then thoroughly washed in baths of soda, and, when sufficiently dried by pressure, it was in a state to be compressed, that is to say, to produce a solid material, rough, no doubt, and such as would have no value in a manufacturing centre of Europe or America, but which would be highly esteemed in the Lincoln Island markets.

This sort of material must have been known from the most ancient times, and, in fact, the first woollen stuffs were manufactured by the process which Harding was now about to employ. Where Harding's engineering qualifications now came into play was in the construction of the machine for pressing the wool, for he knew how to turn ingeniously to profit the mechanical force, hitherto unused, which the waterfall on the beach possessed to move a fulling-mill.

Nothing could be more rudimentary. The wool was placed in troughs, and upon it fell in turns heavy wooden mallets, such was the machine in question, and such it had been for centuries until the time when the mallets were replaced by cylinders of compression, and the material

was no longer subjected to beating, but to regular rolling.

The operation, ably directed by Cyrus Harding, was a complete success.

The wool, previously impregnated with a solution of soap, intended on the one hand to facilitate the interlacing, the compression, and the softening of the wool, and on the other to prevent its diminution by the beating, issued from the mill in the shape of thick felt cloth.

The roughnesses with which the staple of wool is naturally filled were so thoroughly entangled and interlaced together that a material was formed equally suitable either for garments or bedclothes. It was certainly neither merino, muslin, cashmere, rep, satin, alpaca, cloth, nor flannel. It was "Lincolnian felt," and Lincoln Island possessed yet another manufacture. The colonists had now warm garments and thick bedclothes, and they could without fear await the approach of the winter of 1866-67.

The severe cold began to be felt about the 20th of June, and, to his great regret, Pencroft was obliged to suspend his boat-building, which he hoped to finish in time for next spring.

The sailor's great idea was to make a voyage of discovery to Tabor Island, although Harding could not approve of a voyage simply for curiosity's sake, for there was evidently nothing to be found on this desert and almost arid rock. A voyage of a hundred and fifty miles in a comparatively small vessel, over unknown seas, could not but cause him some anxiety. Suppose that their vessel, once out at sea, should be unable to reach Tabor Island, and could not return to Lincoln

Island, what would become of her in the midst of the Pacific, so fruitful of disasters?

Harding often talked over this project with Pencroft, and he found him strangely bent upon undertaking this voyage, for which determination he himself could give no sufficient reason.

"Now," said the engineer one day to him, "I must observe, my friend, that after having said so much, in praise of Lincoln Island, after having spoken so often of the sorrow you would feel if you were obliged to forsake it, you are the first to wish to leave it."

"Only to leave it for a few days," replied Pencroft, "only for a few days, captain. Time to go and come back, and see what that islet is like!"

"But it is not nearly as good as Lincoln Island."

"I know that beforehand."

"Then why venture there?"

"To know what is going on in Tabor Island."

"But nothing is going on there; nothing could happen there."

"Who knows?"

"And if you are caught in a hurricane?"

"There is no fear of that in the fine season," replied Pencroft. "But, captain, as we must provide against everything, I shall ask your permission to take Herbert only with me on this voyage."

"Pencroft," replied the engineer, placing his hand on the sailor's shoulder, "if any misfortune happens to you, or to this lad, whom chance has made our child, do you think we could ever cease to blame ourselves?"

"Captain Harding," replied Pencroft, with unshaken confidence, "we shall not cause you that sorrow. Besides, we will speak further of this voyage, when the time comes to make it. And I fancy, when you have seen our tight-rigged little craft, when you have observed how she behaves at sea, when we sail round our island, for we will do so together--I fancy, I say, that you will no longer hesitate to let me go. I don't conceal from you that your boat will be a masterpiece."

"Say 'our' boat, at least, Pencroft," replied the engineer, disarmed for the moment. The conversation ended thus, to be resumed later on, without convincing either the sailor or the engineer.

The first snow fell towards the end of the month of June. The corral had previously been largely supplied with stores, so that daily visits to it were not requisite; but it was decided that more than a week

should never be allowed to pass without some one going to it.

Traps were again set, and the machines manufactured by Harding were tried. The bent whalebones, imprisoned in a case of ice, and covered with a thick outer layer of fat, were placed on the border of the forest at a spot where animals usually passed on their way to the lake.

To the engineer's great satisfaction, this invention, copied from the Aleutian fishermen, succeeded perfectly. A dozen foxes, a few wild boars, and even a jaguar, were taken in this way, the animals being found dead, their stomachs pierced by the unbent bones.

An incident must here be related, not only as interesting in itself, but because it was the first attempt made by the colonists to communicate with the rest of mankind.

Gideon Spilett had already several times pondered whether to throw into the sea a letter enclosed in a bottle, which currents might perhaps carry to an inhabited coast, or to confide it to pigeons.

But how could it be seriously hoped that either pigeons or bottles could cross the distance of twelve hundred miles which separated the island from any inhabited land? It would have been pure folly.

But on the 30th of June the capture was effected, not without difficulty, of an albatross, which a shot from Herbert's gun had

slightly wounded in the foot. It was a magnificent bird, measuring ten feet from wing to wing, and which could traverse seas as wide as the Pacific.

Herbert would have liked to keep this superb bird, as its wound would soon heal, and he thought he could tame it; but Spilett explained to him that they should not neglect this opportunity of attempting to communicate by this messenger with the lands of the Pacific; for if the albatross had come from some inhabited region, there was no doubt but that it would return there so soon as it was set free.

Perhaps in his heart Gideon Spilett, in whom the journalist sometimes came to the surface, was not sorry to have the opportunity of sending forth to take its chance an exciting article relating the adventures of the settlers in Lincoln Island. What a success for the authorised reporter of the New York Herald, and for the number which should contain the article, if it should ever reach the address of its editor, the Honourable John Benett!

Gideon Spilett then wrote out a concise account, which was placed in a strong waterproof bag, with an earnest request to whoever might find it to forward it to the office of the New York Herald. This little bag was fastened to the neck of the albatross, and not to its foot, for these birds are in the habit of resting on the surface of the sea; then liberty was given to this swift courier of the air, and it was not without some emotion that the colonists watched it disappear in the misty west.

"Where is he going to?" asked Pencroft.

"Towards New Zealand," replied Herbert.

"A good voyage to you," shouted the sailor, who himself did not expect any great result from this mode of correspondence.

With the winter, work had been resumed in the interior of Granite House, mending clothes and different occupations, amongst others making the sails for their vessel, which were cut from the inexhaustible balloon-case.

During the month of July the cold was intense, but there was no lack of either wood or coal. Cyrus Harding had established a second fireplace in the dining-room, and there the long winter evenings were spent. Talking whilst they worked, reading when the hands remained idle, the time passed with profit to all.

It was real enjoyment to the settlers when in their room, well lighted with candles, well warmed with coal, after a good dinner, elder-berry coffee smoking in the cups, the pipes giving forth an odoriferous smoke, they could hear the storm howling without. Their comfort would have been complete, if complete comfort could ever exist for those who are far from their fellow creatures, and without any means of communication with them. They often talked of their country, of the friends whom they had left, of the grandeur of the American Republic,

whose influence could not but increase, and Cyrus Harding, who had been much mixed up with the affairs of the Union, greatly interested his auditors by his recitals, his views, and his prognostics.

It chanced one day that Spilett was led to say,--

"But now, my dear Cyrus, all this industrial and commercial movement to which you predict a continual advance, does it not run the danger of being sooner or later completely stopped?"

"Stopped! And by what?"

"By the want of coal, which may justly be called the most precious of minerals."

"Yes, the most precious indeed," replied the engineer; "and it would seem that nature wished to prove that it was so by making the diamond, which is simply pure carbon crystallised."

"You don't mean to say, captain," interrupted Pencroft, "that we burn diamonds in our stoves in the shape of coal?"

"No, my friend," replied Harding.

"However," resumed Gideon Spilett, "you do not deny that some day the coal will be entirely consumed?"

"Oh! the veins of coal are still considerable, and the hundred thousand miners who annually extract from them a hundred millions of hundredweights have not nearly exhausted them."

"With the increasing consumption of coal," replied Gideon Spilett, "it can be foreseen that the hundred thousand workmen will soon become two hundred thousand, and that the rate of extraction will be doubled."

"Doubtless, but after the European mines, which will be soon worked more thoroughly with new machines, the American and Australian mines will for a long time yet provide for the consumption in trade."

"For how long a time?" asked the reporter.

"For at least two hundred and fifty or three hundred years."

"That is reassuring for us, but a bad look-out for our great grandchildren!" observed Pencroft.

"They will discover something else," said Herbert.

"It is to be hoped so," answered Spilett, "for without coal there would be no machinery, and without machinery there would be no railways, no steamers, no manufactories, nothing of that which is indispensable to modern civilisation!"

"But what will they find?" asked Pencroft. "Can you guess, captain?"

"Nearly, my friend."

"And what will they burn instead of coal?"

"Water," replied Harding.

"Water!" cried Pencroft, "water as fuel for steamers and engines! water to heat water!"

"Yes, but water decomposed into its primitive elements," replied Cyrus Harding, "and decomposed, doubtless; by electricity, which will then have become a powerful and manageable force, for all great discoveries, by some inexplicable law, appear to agree and become complete at the same time. Yes, my friends, I believe that water will one day be employed as fuel, that hydrogen and oxygen which constitute it, used singly or together, will furnish an inexhaustible source of heat and light, of an intensity of which coal is not capable. Some day the coal-rooms of steamers and the tenders of locomotives will, instead of coal, be stored with these two condensed gases, which will burn in the furnaces with enormous calorific power. There is, therefore, nothing to fear. As long as the earth is inhabited it will supply the wants of its inhabitants, and there will be no want of either light or heat as long as the productions of the vegetable, mineral or animal kingdoms do not fail us. I believe, then, that when the deposits of coal are exhausted, we shall heat and warm ourselves with water. Water will be the coal of the future."

"I should like to see that," observed the sailor.

"You were born too soon, Pencroft," returned Neb, who only took part in the discussion by these words.

However, it was not Neb's speech which interrupted the conversation, but Top's barking, which broke out again with that strange intonation which had before perplexed the engineer. At the same time Top began to run round the mouth of the well, which opened at the extremity of the interior passage.

"What can Top be barking in that way for?" asked Pencroft.

"And Jup be growling like that?" added Herbert.

In fact the orang, joining the dog, gave unequivocal signs of agitation, and, singular to say, the two animals appeared more uneasy than angry.

"It is evident," said Gideon Spilett, "that this well is in direct communication with the sea, and that some marine animal comes from time to time to breathe at the bottom."

"That's evident," replied the sailor, "and there can be no other explanation to give. Quiet there, Top!" added Pencroft, turning to the dog, "and you, Jup, be off to your room!"

The ape and the dog were silent. Jup went off to bed, but Top remained in the room, and continued to utter low growls at intervals during the rest of the evening. There was no further talk on the subject, but the incident, however, clouded the brow of the engineer.

During the remainder of the month of July there was alternate rain and frost. The temperature was not so low as during the preceding winter, and its maximum did not exceed eight degrees Fahrenheit. But although this winter was less cold, it was more troubled by storms and squalls; the sea besides often endangered the safety of the Chimneys. At times it almost seemed as if an under-current raised these monstrous billows which thundered against the wall of Granite House.

When the settlers, leaning from their windows, gazed on the huge watery masses breaking beneath their eyes, they could not but admire the magnificent spectacle of the ocean in its impotent fury. The waves rebounded in dazzling foam, the beach entirely disappearing under the raging flood, and the cliff appearing to emerge from the sea itself, the spray rising to a height of more than a hundred feet.

During these storms it was difficult and even dangerous to venture out, owing to the frequently falling trees; however, the colonists never allowed a week to pass without having paid a visit to the corral. Happily this enclosure, sheltered by the south-eastern spur of Mount Franklin, did not greatly suffer from the violence of the hurricanes, which spared its trees, sheds, and palisades; but the

poultry-yard on Prospect Heights, being directly exposed to the gusts of wind from the east, suffered considerable damage. The pigeon-house was twice unroofed and the paling blown down. All this required to be re-made more solidly than before, for, as may be clearly seen, Lincoln Island was situated in one of the most dangerous parts of the Pacific. It really appeared as if it formed the central point of vast cyclones, which beat it perpetually as the whip does the top, only here it was the top which was motionless and the whip which moved. During the first week of the month of August the weather became more moderate, and the atmosphere recovered the calm which it appeared to have lost for ever. With the calm the cold again became intense, and the thermometer fell to eight degrees Fahrenheit, below zero.

On the 3rd of August an excursion which had been talked of for several days was made into the south-eastern part of the island, towards Tadorn Marsh. The hunters were tempted by the aquatic game which took up their winter-quarters there. Wild duck, snipe, teal, and grebe, abounded there, and it was agreed that a day should be devoted to an expedition against these birds.

Not only Gideon Spilett and Herbert, but Pencroft and Neb also took part in this excursion. Cyrus Harding alone, alleging some work as an excuse, did not join them, but remained at Granite House.

The hunters proceeded in the direction of Port Balloon, in order to reach the marsh, after having promised to be back by the evening. Top and Jup accompanied them. As soon as they had passed over the Mercy

Bridge, the engineer raised it and returned, intending to put into execution a project for the performance of which he wished to be alone.

Now this project was to minutely explore the interior well, the mouth of which was on a level with the passage of Granite House, and which communicated with the sea, since it formerly supplied a way to the waters of the lake.

Why did Top so often run round this opening? Why did he utter such strange barks when a sort of uneasiness seemed to draw him towards this well. Why did Jup join Top in a sort of common anxiety? Had this well branches besides the communication with the sea? Did it spread towards other parts of the island? This is what Cyrus Harding wished to know. He had resolved, therefore, to attempt the exploration of the well during the absence of his companions, and an opportunity for doing so had now presented itself.

It was easy to descend to the bottom of the well by employing the rope-ladder which had not been used since the establishment of the lift. The engineer drew the ladder to the hole, the diameter of which measured nearly six feet, and allowed it to unroll itself after having securely fastened its upper extremity. Then, having lighted a lantern, taken a revolver, and placed a cutlass in his belt, he began the descent.

The sides were everywhere entire; but points of rock jutted out here

and there, and by means of these points it would have been quite possible for an active creature to climb to the mouth of the well.

The engineer remarked this; but although he carefully examined these points by the light of his lantern, he could find no impression, no fracture which could give any reason to suppose that they had either recently or at any former time been used as a staircase. Cyrus Harding descended deeper, throwing the light of his lantern on all sides.

He saw nothing suspicious.

When the engineer had reached the last rounds he came upon the water, which was then perfectly calm. Neither at its level nor in any other part of the well, did any passage open which could lead to the interior of the cliff. The wall which Harding struck with the hilt of his cutlass sounded solid. It was compact granite, through which no living being could force a way. To arrive at the bottom of the well and then climb up to its mouth it was necessary to pass through the channel under the rocky sub-soil of the beach, which placed it in communication with the sea, and this was only possible for marine animals. As to the question of knowing where this channel ended, at what point of the shore, and at what depth beneath the water, it could not be answered.

Then Cyrus Harding, having ended his survey, re-ascended, drew up the ladder, covered the mouth of the well, and returned thoughtfully to the dining-room, saying to himself,--

"I have seen nothing, and yet there is something there!"