## CHAPTER XXVIII.

## THE RESCUE IN THE WHISPERING GALLERY

When I returned to partial life my face was wet with tears. How long that state of insensibility had lasted I cannot say. I had no means now of taking account of time. Never was solitude equal to this, never had any living being been so utterly forsaken.

After my fall I had lost a good deal of blood. I felt it flowing over me. Ah! how happy I should have been could I have died, and if death were not yet to be gone through. I would think no longer. I drove away every idea, and, conquered by my grief, I rolled myself to the foot of the opposite wall.

Already I was feeling the approach of another faint, and was hoping for complete annihilation, when a loud noise reached me. It was like the distant rumble of continuous thunder, and I could hear its sounding undulations rolling far away into the remote recesses of the abyss.

Whence could this noise proceed? It must be from some phenomenon proceeding in the great depths amidst which I lay helpless. Was it an explosion of gas? Was it the fall of some mighty pillar of the globe?

I listened still. I wanted to know if the noise would be repeated. A quarter of an hour passed away. Silence reigned in this gallery. I could not hear even the beating of my heart.

Suddenly my ear, resting by chance against the wall, caught, or seemed to catch, certain vague, indescribable, distant, articulate sounds, as of words.

"This is a delusion," I thought.

But it was not. Listening more attentively, I heard in reality a murmuring of voices. But my weakness prevented me from understanding what the voices said. Yet it was language, I was sure of it.

For a moment I feared the words might be my own, brought back by the echo. Perhaps I had been crying out unknown to myself. I closed my lips firmly, and laid my ear against the wall again.

"Yes, truly, some one is speaking; those are words!"

Even a few feet from the wall I could hear distinctly. I succeeded in catching uncertain, strange, undistinguishable words. They came as if pronounced in low murmured whispers. The word 'forlorad' was several times repeated in a tone of sympathy and sorrow.

"Help!" I cried with all my might. "Help!"

I listened, I watched in the darkness for an answer, a cry, a mere breath of sound, but nothing came. Some minutes passed. A whole world of ideas had opened in my mind. I thought that my weakened voice could never penetrate to my companions.

"It is they," I repeated. "What other men can be thirty leagues under ground?"

I again began to listen. Passing my ear over the wall from one place to another, I found the point where the voices seemed to be best heard. The word 'forlorad' again returned; then the rolling of thunder which had roused me from my lethargy.

"No," I said, "no; it is not through such a mass that a voice can be heard. I am surrounded by granite walls, and the loudest explosion could never be heard here! This noise comes along the gallery. There must be here some remarkable exercise of acoustic laws!"

I listened again, and this time, yes this time, I did distinctly hear my name pronounced across the wide interval.

It was my uncle's own voice! He was talking to the guide. And 'forlorad' is a Danish word.

Then I understood it all. To make myself heard, I must speak along

this wall, which would conduct the sound of my voice just as wire conducts electricity.

But there was no time to lose. If my companions moved but a few steps away, the acoustic phenomenon would cease. I therefore approached the wall, and pronounced these words as clearly as possible:

"Uncle Liedenbrock!"

I waited with the deepest anxiety. Sound does not travel with great velocity. Even increased density air has no effect upon its rate of travelling; it merely augments its intensity. Seconds, which seemed ages, passed away, and at last these words reached me:

"Axel! Axel! is it you?"

. . . .

"Yes, yes," I replied.

. . . .

"My boy, where are you?"

. . . .

"Lost, in the deepest darkness."
"Where is your lamp?"
"It is out."
"And the stream?"
"Disappeared."
"Axel, Axel, take courage!"
"Wait! I am exhausted! I can't answer. Speak to me!"

. . . .

"Courage," resumed my uncle. "Don't speak. Listen to me. We have looked for you up the gallery and down the gallery. Could not find you. I wept for you, my poor boy. At last, supposing you were still on the Hansbach, we fired our guns. Our voices are audible to each other, but our hands cannot touch. But don't despair, Axel! It is a great thing that we can hear each other."

. . . .

During this time I had been reflecting. A vague hope was returning to my heart. There was one thing I must know to begin with. I placed my lips close to the wall, saying:

"My uncle!"

. . . .

"My boy!" came to me after a few seconds.

. . . .

"We must know how far we are apart."

. . . .

"That is easy."
"You have your chronometer?"
"Yes."
"Well, take it. Pronounce my name, noting exactly the second when you
speak. I will repeat it as soon as it shall come to me, and you will
observe the exact moment when you get my answer."
"Yes; and half the time between my call and your answer will exactly
indicate that which my voice will take in coming to you."
"Just so, my uncle."

"Are you ready?"
"Yes."
"Now, attention. I am going to call your name."
I put my ear to the wall, and as soon as the name 'Axel' came I
immediately replied "Axel," then waited.
"Forty seconds," said my uncle. "Forty seconds between the two words;
so the sound takes twenty seconds in coming. Now, at the rate of
1,120 feet in a second, this is 22,400 feet, or four miles and a
quarter, nearly."
"Four miles and a quarter!" I murmured

. . . .

"It will soon be over, Axel."

. . . .

"Must I go up or down?"

. . . .

"Down--for this reason: We are in a vast chamber, with endless galleries. Yours must lead into it, for it seems as if all the clefts and fractures of the globe radiated round this vast cavern. So get up, and begin walking. Walk on, drag yourself along, if necessary slide down the steep places, and at the end you will find us ready to receive you. Now begin moving."

. . . .

These words cheered me up.

"Good bye, uncle." I cried. "I am going. There will be no more voices heard when once I have started. So good bye!"

. . . .

"Good bye, Axel, au revoir!"

. . . .

These were the last words I heard.

This wonderful underground conversation, carried on with a distance of four miles and a quarter between us, concluded with these words of hope. I thanked God from my heart, for it was He who had conducted me through those vast solitudes to the point where, alone of all others perhaps, the voices of my companions could have reached me.

This acoustic effect is easily explained on scientific grounds. It arose from the concave form of the gallery and the conducting power of the rock. There are many examples of this propagation of sounds which remain unheard in the intermediate space. I remember that a similar phenomenon has been observed in many places; amongst others on the internal surface of the gallery of the dome of St. Paul's in London, and especially in the midst of the curious caverns among the quarries near Syracuse, the most wonderful of which is called Dionysius' Ear.

These remembrances came into my mind, and I clearly saw that since my uncle's voice really reached me, there could be no obstacle between us. Following the direction by which the sound came, of course I should arrive in his presence, if my strength did not fail me.

I therefore rose; I rather dragged myself than walked. The slope was rapid, and I slid down.

Soon the swiftness of the descent increased horribly, and threatened to become a fall. I no longer had the strength to stop myself.

Suddenly there was no ground under me. I felt myself revolving in air, striking and rebounding against the craggy projections of a vertical gallery, quite a well; my head struck against a sharp corner of the rock, and I became unconscious.