

The engine came slowly along, and I heard the voice of men shouting to one another. Why, then, should they not hear me? I tried, too, to shout, but my voice stuck in my throat. I couldn't make a sound louder than a whisper; no, not with all the good will I had to shout like an archangel.

The engine came so near at last that I could see the glow of her fires through the interstices of the flooring of the bridge. And now there were men standing with lanterns at the very extremity of the bridge; and still I could not make them hear.

For an instant the glad thought had struck me that I had been missed, and that these men had come to look for me; but the next moment I saw the folly of the idea. Days might elapse before my fate was known. I was not even yet beyond the time I had fixed for reaching home. No; going to do a night's shift of work on the bridge, and I couldn't make them hear.

Suddenly I heard a sharp, quick bark, and then a growl as of anger or inquiry, and I was conscious that there was a dog with the men above. The dog's faculties were keener than the men's; perhaps it was possible I might make him hear; so I barked, a shrill, snapping bark, with which I had often deceived my own terrier Jock. The dog acknowledged the challenge, and replied furiously. Then I heard the voice of a man shouting to the dog to be quiet; but the dog barked still more furiously, standing at the very verge of the platform, as though it would throw itself over. Then some men came to the edge of the platform too, and peered over, and then in my extremity I gave a cry—a wild despairing cry. Then a huge hoarse wave dashed over me.

If it had not been the consciousness that help was near, I could not have held up against that furious rush of water; but I did hold on, at least I think so, and when the wave receded, a bright dazzling light shone into my eyes, a light from the bridge, where some one was holding what seemed to be a portable sun, but that was actually a piece of burning magnesium wire. Then everything disappeared in the blackest darkness.

"Did you see anything?" cried a voice.

"I'm not sure; I thought I saw something move."

A couple of lamps from the engine were now brought, and placed at the edge of the platform; they lit up the beams and rafters of the bridge, but the light seemed to be lost in the dark waters! Ah! they would never see me!

Once more I had strength to cry.

"Ah? it's a man down there," I heard him shout.

A long plank was run over the gap in the bridge; then another; along the two a portable windlass was quickly wheeled; a bucket descended, in it a man with a lantern.

"Hallo, mate!" he cried, as he caught sight of my face in the focus of his lamp "what the deuce are you doing here?"

In another moment I was standing in safety on the further side of the bridge, I owed my rescue to the unexpected visit of the chief engineer of the line, who had come down to see with his own eyes the manner in which the bridge behaved in a heavy gale, and had driven with the engine to the farthest accessible point of the platform.

What a comforting glass of brandy and water that was of which I partook by the warmth of the engine furnace, and how exhilarating the run homeward on the swift shrieking engine!

I was at Dolbadarn in time for dinner, after all. As I sat down to the cheerful meal with friends who were discussing the light ordinary topics of the day, I looked about me, wondering if I were really here in actual corporeal presence, or if my life had ended in that last rush of water, and I were only dreaming "for in that sleep of death what dreams may come!"

WRITING FOR THE PAPERS.

Carrie Leslie had just turned down the narrow chestnut shaded path that led along the river side to the quiet old farmhouse where she was spending these sultry summer days—a slight, violet-eyed young girl, with long masses of golden hair, cheeks rather pale, and a dress of simple French calico, made and trimmed with her own hands.

Lenora Martin looked almost contemptuously after her, as she stood at the bend of the road leaning lightly on Mr. Wyford's arm. Miss Martin was tall and finely formed, with a way of throwing her head back as she walked. Moreover, her attire was of dainty checked silk, and she wore gold ornaments in her ears, and at her throat. The two girls were of as different types of beauty as could be easily conceived.

"Isn't it strange," said Lenora, carelessly, "that Miss Leslie prefers that horrid little farmhouse to the hotel, where everybody else that is worth knowing stays?"

"Perhaps," began Mr. Wyford, quietly, "Miss Leslie's taste—"

"Oh, it isn't that," interposed Lenora, somewhat sharply. "It's from a motive of economy."

"Do you think so," said he.

"I am quite sure of it. Don't you observe how shabbily she dresses—calico dresses, linen sets, and not a jewel about her?"

Lenora. "But it is really true that she writes for the papers."

"I believe so," answered Mr. Wyford, as he walked slowly towards Heathdale Hotel with his companion.

"But I thought people who wrote for papers were always smart and brilliant, and Carrie is plain and quiet."

"I don't altogether agree with either of your inferences, Miss Martin."

"What does she write?" asked Lenora, sharply.

"Have you never read those exquisite little sketches under the signature of 'Clarice' in the 'New York Guest'?"

"Oh! Those insignificant little affairs. Yes, of course I have! You don't mean to say that the editors pay her for that silly, sentimental trash?"

"I believe they do."

Miss Martin was silent for a moment or two. Devoted as she was to dress, show, and a thousand other minor extravagances, money was a considerable object in her eyes, and she envied any other woman who had the faculty of earning it for herself.

"Mr. Wyford," said she, with a little laugh that was meant to be captivating, "without being conceited, I do believe I could write a great deal better than that 'Clarice' nonsense. It's so simple—just like one person talking to another—no fine words or elevated phrases."

"I am told that is considered the chief charm of her pen," observed Mr. Wyford.

"I dare say it does very well when they can't get anything better," said Miss Lenora.

"Now I've got the plot of a charming Moorish story in my head, with old castles like the Alhambra in it, and a band of robbers, and a magician in a velvet robe, and—but just wait until I write it out, and I will read it to you. Don't you think the 'New York Guest' would be delighted to publish it?"

"Really," said Mr. Wyford, dubiously, "I hardly know. I believe the quiet, impersonations of every day life—"

"Pshaw!" said Miss Martin, confidently. "Who cares about every-day life when they can read of robbers and bandits' caves? I think I shall call it 'The Scourge of the Moors.' Or would 'Black Alfonso, or the Brigand's Doom,' be better? But here we are at the hotel, and I must run and get ready for tea."

Lenora was thinking, however, of "Black Alfonso" all the time she was brushing out her black curls. As she went down stairs she met Mrs. Elliott, the judge's wife, the greatest lady in all the hotel limits, busting down in her silver-grey silk.

"Why, Mrs. Elliott! What's the matter!" said Lenora, as she detected the traces of tears on the lady's cheek. "You have been crying!"

Mrs. Elliott laughed.

"And I am not ashamed to confess it, either," she said. "I have been crying, Miss Martin, and I don't know who can help it when they read 'Clarice's' beautiful sketch published this week in the 'Guest,' about little Harry's death. Have you not seen the 'Guest'?"

"No, ma'am," said Miss Martin, arching her upper lip with rather contemptuous curl.

"No? No? Well, I'll send it to your room to-night." And kindly Mrs. Elliott passed on.

Lenora did not divulge to Mrs. Elliott that she had learned the secret of "Clarice's" identity with simple little Carrie Leslie, who boarded at the farmhouse and wore calico dresses; but she was more than ever confirmed in her determination to enter the lists of authorship, and eclipse Miss Leslie's light at once.

She sat up late that night, drafting out a rough sketch of the Moorish story, and shut herself up all the next day in her own room, writing. She culled out the most resonant words in the dictionary—she sprinkled the tale with Spanish phrases picked out of the "Book of Quotations," to give a general idea that she was familiar with the Spanish language; and made it musical with the play of fountains in paving courts, odoriferous with the heavy scent of orange groves, and luminous with stars shining out of purple midnight heavens.

"There!" said Miss Lenora to herself, when she had read it over for the third time, equally well pleased with each perusal. "If that don't cut out 'Clarice,' there's no taste left in the literary world. Of course they will wish to engage me to write regularly for them, and they must pay me well. How nice it will be to have lots of money of my own, without being compelled to coax papa, just as if every dollar was a drop of blood out of a stone."

"I am so sorry you were away yesterday, Mr. Wyford," said Miss Lenora, as she met him at the breakfast table one morning.

"Indeed! I am very much obliged to you for being so kind as to miss me, but I hardly comprehend why," said he.

"I wanted to read you my story. I sent it to the 'Guest' by last evening's mail."

"I have no doubt it would have been a literary treat," said Mr. Wyford, courteously.

"Oh, I'm not at all sure of that," said Miss Martin, tossing her head in all the conscious pride of authorship. "But I should really like to have had your critical opinion of it. I suppose you read a great deal?"

"A little," answered he.

"Though, of course, my own reading has been extensive, and if I couldn't write better

than that bit of Carrie Leslie, I would give up. I'll send you a copy of the 'Guest' containing my story, if you would like to see it in print."

"Thank you," said Mr. Wyford, with rather a queer look on his face, which was half a smile and half a frown: "you are very kind."

Miss Martin whispered her secret, confidentially, of course, to every gentleman at the Heathdale House, and two-thirds of the ladies.

On the eighth day thereafter, a huge yellow colored envelope was handed her by Sam, who always went for the mails. Lenora flushed up to her forehead. Could it be possible that the missive was distended with bank-bills? Did the 'Guest' pay as liberally as that? The matter was speedily defined, however. She tore off the envelope, amid a circle of admiring and expectant friends, and out dropped "Black Alfonso," with a strip of paper belted around him, containing the simple words: "Respectfully Declined."

If Lenora Martin did not go into hysterics, it was only because she was not constitutionally inclined to that escape-valve for her feelings. She swept out of the room, biting her lips till you would have thought the teeth would have met through the quivering flesh.

She was unusually silent when she came down to tea that night. Mortified pride is by no means a quickener to the tongue, and Miss Martin would have given the prettiest dress in her wardrobe if she only had the sense to keep her own counsel respecting "Black Alfonso."

"Lenora," whispered Mrs. Elliott to her, "I've a bit of news for you—three bits of news in fact."

"Ah!" said Lenora, trying to look interested. "What are they?"

"In the first place, I have discovered that the 'Clarice,' who has taken all our hearts by storm through the witchery of her pen, is no other than Carrie Leslie, and that Mr. Wyford is one of the editors of the 'New York Guest.'"

Lenora colored scarlet as she thought of all the foolish things she had said, and Mrs. Elliott went exultingly on, quite unaware of the sting lingering within her words.

"And what do you think Mrs. Livingston tells me? They are to be married next month! My dear, you are not ill?"

"No," said Lenora, huskily. "I—I have only forgotten my pocket handkerchief."

And Miss Martin flew up stairs after the bit of linen cambric that was safe in her own pocket, coming down no more that evening. She burned "Black Alfonso," orange blossoms, moonlight, musical fountains, and all; and she never wrote any more productions for the "New York Guest."

SCIENTIFIC.

ANDROIDES.

Wandering one day through the streets of Vienna, notice of an exhibition of various mechanical figures was sufficiently attractive to induce us to enter. It was a rare collection of apparently self-moving men on women, who had everything but souls to make them independent citizens. Vancarin was one of the extraordinary mechanical geniuses in the early part of the last century. His artificial duck, that paddled about the margin of a pond, picked up corn and significantly quacked at suitable intervals, was a wonderful triumph of skill, but the spinet player put into the shade every android invention before or since. There sat a really handsome young lady before the instrument (the forerunner of the present piano) with a music book before her. When wound up, the performer first looked either way upon the audience, bowed gracefully and then began to finger the keys. She swept her fingers to and fro the whole length of the instrument in the usual manner—the fingers acting separately—vibrating over the ivory so naturally as to deceive any one not informed that she was a mere machine made up of an aggregation of wheels, cams, levers and catgut cordage. As many different airs were executed as were satisfactory to an inquisitive stranger: of course old French music, in vogue when the artist finished the interior. After the springs were exhausted, the operator unbuttoned the musician's dress between her shoulders, unlaced her stays, and next with a key unlocked the chest. Swinging open a brass door, there was an exposition of contrivances, especially of cams as thin as paper sliding side by side, amazing to view. There was a multitudinous congregation of powers. Catgut cords extended from barrels down the arms to the extremity of each finger, which they controlled precisely like digital muscles. It would be a prolix story to dwell on all the minutiae of that masterpiece. Suffice it to say that the man having the show, himself a mechanic of rare ingenuity, said that from boyhood he had read about the spinet player. When he had completed his apprenticeship, he went to Paris to find it. After a tedious persevering search, it was found packed away in a lumber room of one of the state departments, where it had been forgotten, having been there since the outbreak of the French revolution. He had permission to take it away on a promise to return it, he holding out an expectation of being able to put the lady once more in motion, which no modern artisan would undertake to do. He soon mastered the intricacies of the mechan-

ism, and we saw it reappear, in the form of another android movement, quite as interesting, in the same exhibition was a miniature old man, smoking while drawing a hand cart laden with trunks and boxes. Of course both man and cart were on a small scale, but so extraordinary was the resemblance to a live man bracing his feet in order to drag the load, a spectator could not restrain an expression of enthusiasm as the cart rolled along the floor. It was the production of a watchmaker somewhere in Switzerland, who was paid five hundred dollars for the curiosity, which he made in the course of long winter evenings. Since Menzel exhibited the mechanical chess player (which by the way, was not conducted by machinery), although the rope dancer, a skillfully managed wonder, more nearly approached a first class android device, no very striking things have been invented of that kind at home or abroad. The trumpeter was a marvel at first, but the same bellows would have supplied the instrument with wind if it had been in a barrel or a packing box. When that fact was realized by visitors, the excitement gradually subsided. Some inventors among us are capable of making such ingenious contrivances, but few can afford the time.

IN PURSUIT OF SCIENTIFIC INFORMATION.

Some years past, among a variety of presents to the Imam of Yeman, from an English gentleman, was a medicine chest. His Royal Highness availed himself of an opportune visit of a European to his domains, to ascertain the exact virtue of each article, writing out in full with his own hand the dose, to prevent mistakes. How he succeeded in the administration of drugs to cure diseases of which he knew less than he did of the remedies has not been chronicled.

Before the dethronement of His Majesty the last king of Oude, in a collection of presents from the British Government was a box of soda powders. He demanded of the chamberlain of the palace what they were for? It was explained to him to be a right royal beverage, such as was habitually taken by the sovereign of Great Britain. "Well then," said the great potentate of India, "let me try them." One dozen papers of the soda were dissolved in a tumbler of water and gulped down, at one long swallow. Smacking his lips, the monarch denounced it as a barbarous drink as ever was invented, expressing unqualified surprise that Christian royalty could revel on such horrid stuff.

Fortunately it was discovered that there were twelve papers of tartaric acid to go with the first. "Ah ha!" exclaimed the king, still scowling with the shocking taste of soda, "let us have them instantly." A moment after, the whole court was thrown into frightful alarm by the extraordinary contortions, writhings and groanings of His Majesty, rolling over the floor, oppressed with gas. He felt himself blown up like an air balloon, expecting momentarily to explode. When relieved, he expressed surprise that the civilization of Europe considered soda water a luxury for none but crowned heads.

POWER OF INTELLECT.

Thomas Telford, who died in London on September 2, 1834, was one of the most remarkable engineers of our times, when the circumstances of his origin are taken into consideration, as family influence is so potent in Great Britain. He was the son of a poor shepherd in Scotland. His father died when he was a small boy, leaving him alone to contend with poverty for position. Unaided he became a splendid French, Italian, and Latin scholar, and an engineer of such transcendent ability as to be an eminent authority. Bridge building was his forte. He built the suspension bridge at the Straits of Menai, quite as marvelous as the tubular bridge a mile above it. St. Katherine's docks in London are splendid evidences of Mr. Telford's extraordinary engineering attainments. His death was deplored as a national loss.

A CURIOUS PAIR OF JAWS.

Don't you think it must be a curious pair of jaws that can bite off a chunk of cold iron as easily as you can bite a piece of candy?

You hardly believe it? Wait till I tell you.

One of the most interesting places I ever visited was a room filled with these monsters with sharpsteed jaws, called nail-machines.

In the first places, the noise made by several of these machines in one room is something absolutely fearful. I wanted to stuff my ears with cotton; but I thought that would not be very civil to my guide, and after a little I got used to it, and soon found myself so much interested that I really forgot the noise.

Some machines nip off the tacks so fast that a stream of finished tacks runs down a tin tube into a reservoir—thousands in a minutes. Listen to the ticking of a clock, and reflect that every time it ticks at least twenty tacks are snapped off.

But I must tell you how they do it.

First, the iron bar, as it comes from the works, is put between immense rollers, which flatten it out as nicely as a cook can roll out pie-crust with a rolling-pin. The bar of iron is thus made into a sheet, just thick enough for the nails they want to make. It goes

next to the slitting machine, which makes no more fuss about slitting it into the proper widths for nails than your scissors make about cutting paper.

When the sheet of iron is all ready, a man takes one, and slips the end into the steel jaws I told you of.

These jaws are worked by a power, and instantly they bite off a nail, while the little hammer springs back, ready to give one blow on the end of the bit of iron.

It and thus makes a head.

If you want to know what a blow that is, be, take a piece of iron and try to pound a nail on it yourself.

The instant the head is made, the jaws open and the nail drops out finished. Of course it is done much quicker than I have been telling you, for a machine can make brads (which I needn't tell the boys are small nails without heads) at the rate of three thousand a minute.

It is said that "figures won't lie," and I hope they won't, but I must admit it is hard to believe that story.

After the tacks come out of the machine, they are "blued," as it is called. It is done by heating them in an oven or on an iron plate.

Then they go to the packing room, where one girl can weigh and put into papers two thousand papers of tacks in a day.

That is another tough story, but my guide assured me it was true.

How many kinds of nails can you name? You will probably be surprised to hear that two hundred kinds of nails are made in one factory, beginning with spikes which weigh nearly half a pound each and ending with the tiniest kind of tacks, not a quarter of an inch long.

Men didn't always have machines to make nails for them, and of course they had to make them by hand. That was no such easy matter; and, in fact, they couldn't make them of cold iron, but had to heat every one.

In some parts of England they are very slow to get machinery, and the ignorant people, thinking their trade is to be spoiled, will break up and destroy any machinery that is brought there. So they work at nail-making as their grandfathers did.

Every man has a little forge—such as you have seen in a blacksmith's shop if you live in a village—and a small anvil. Every child is put to work to make nails at eight or nine years of age, because they earn so little that every one of a family must help earn his bread. Of course these children have no time to learn to read, and many grown men and women can neither read nor write.

This is the way they make the nails. They buy iron rods just the right size for the nails they make—for one family always makes the same size of nail. They take one of these rods, heat it red hot at the forge, lay it on the anvil and cut off the length of a nail; then, laying away the rest of the rod, they take the piece they have cut off, pound it to a point at one end, and pound on a head at the other. A very slow operation, you see, when you think of how the machines snap them off cold. A whole family scarcely ever earns more than five dollars a week at the work, and part of that has to go for the coal it uses.

HOW FAR WE SEE.

Herschel was of the opinion that, with the telescope he used in those researches in the heavens which immortalized his name in the annals of Science, he could penetrate 497 times farther than Sirius, assumed to be at least so far distant that the sun is near at hand in comparison. While exploring with that instrument, 116,000 stars fitted by the object glass in one quarter of an hour, and that subtended an angle of only 15". So all the worlds are moving rapidly in space. Reckoning from the limited zone thus inspected, the celestial region could be examined by giving time enough to the enterprise; and judging from a few sections only within the scope of assisted vision, more than five billions of fixed stars might be reasonably supposed to be recognizable, and could be seen with modern improved instruments. But more are beyond, vastly beyond, and we are hoping and expecting that, when Mr. Clark, the self-made astronomer of Cambridge, Mass., and the most progressive telescope manufacturer now known to scientists, has completed his great work, far more amazing discoveries will be made in the firmament. Surely, the mechanism of the heavens demonstrates the existence of an Intelligent First Cause, since such magnificent displays of unnumbered worlds, regulated by laws which secure order in the universe, could not have originated themselves. God surely reigns and directs.

THE AIR WE BREATHE.

In absorbing into our lungs the quantity of air necessary to sustain life, we inadvertently inhale whole hosts of microscopical animals, which are in suspension in the atmospheric fluid, and even portions of antediluvian animals, mummies, and skeletons of past ages. Every day and hour, this absorption of animal and vegetable life proceeds. We inhale the living microzoa, several species of which are the fish of our blood, and the vibriones, which attach themselves to our teeth like barnacles to a ship's bottom; and with these the dust of microscopical animals, so small that it takes 75,000,000 to make a grain, and the so less minute grains of pollen which, germinating in our lungs, further the spread of parasitic life to a degree far beyond that of the normal life visible to our eyes.