ONTARIO WORKMAN THE

for his companions the Black Prince and his . barons."

"The Black Prince and his barons !" exclaimed Don Pedro, turning pale ; but what matters after all. Am I under tutelage ? Can I not be free when I have paid for their services ?"

"Oh, madam," said Rachel, repreachfully, "I thought the past had been forgotten between us."

"Aixa nover forgets," returned the Morisca "a Moorish woman revenges herself, bcautiful Jewess."

Rachel, overcome with fear and grief, hid her face in her hands and wept.

"And thou, Don Pedro," continued Aixa, "dost thou remember my prediction, that every time we met should be signalised by some sad event? Thou seest that I know how to keep my word. The house of the hangman of Seville is henceforth the residence of the Jewess."

Notwithstanding all the courage of Don Pedro, he trembled at this infamous threat. "What dost thou mean ?" he asked.

"The hangman comes, in virtue of his privilege, to guard the door of the Morabethinto claim publicity for his vassal, that woman -to inscribe on his list the name of Rachel among those abandoned women who pay him tribute."

"Mercy, mercy, madam !" exclaimed the wretched girl, in a desperate voice, her whole frame trembling as if under torture. Had Burdett stood over her with an uplifted dagger she would not have trembled ; she could have braved death, but shame !- the menace of the Morisca threw her into a delirium of sgony. Forgetting all her pride, she dragged herself on her knees to the feet of Aixa, repeating, "Mercy, mercy, I am not guilty !"

"Rise, Rachel," said Don Pedro, assisting and supporting her, "do you forget that you are under my safeguard, and that I am King of Castile and Leon ?"

"For that very reason shalt thou surrender her, in obedience to the law," observed Aixa.

Again did Don Pedro protest that he would never leave the side of Rachel, even should it compromise his crown, his honor, and his life; but so clearly did Aixa show the impossibility of evading the hangman's claim, that Rachel perceived at once the utter ruin that threatened her lover, and with the devotion of real affection determined on becoming the sacrifice -she insisted on being left to her fate-she implored Don Pedro to abandon her.

The king, who had not remained insensible to the force of Aixa's arguments, exclaimed, "But if I abandon thee, my poor child, who then will protect thee ?"

"We will, great brother," answered the sons of Paloma, coming forward, and ranging themselves around poor Rachel.

"You !" exclaimed Rachel, doubtingly, for she felt that resistance would be vain.

At this moment a loud noise was heard from outside, and the bronze gate of the Morabethin. which Gil had taken the precaution to close after him, creaked on its hinnes. The king placed himself before Rachel, sword in hand. "Do you hear?" said the Morisca ? "Juan.

the hangman, is impatient for the prey I have promised him. To work, then, braggadocios, for I am really curious to know how you can escape from this holy place ?"

"And I, likewise," answered Perez, the miner, pointing to the door, "I am curious to know how Sir Juan, the hangman, will penetrate to his new vassal?"

Aixa uttered a shrick of rage as she turned and saw a rampart of granite piled up before the door.

the barons who accompanied them, entered the open door, the hangman and his assistants having made good their entry previously; behind were the varlets and pages, the squires and servants, every one being desirous of witnessing the termination of the drama.

All the lords who were ready to judge Don Pedro and the Jewess were silent and serious. The Princo of Wales was violently agitated; and although Burdett affected to be calm, it was very casy to see his calmness was only assumed.

"Sir," said the Black Prince, stopping his vassal on the threshold, "you asserted to me that your wife had granted an interview to Don Pedro in the Morabethin. You entreated me to come and render you justice against him who plotted your dishonor. I have come." The Black Prince then expressed his surprise and displeasure at the presence of the executioner, and when Burdett explained the old Moorish law. Edward, still repugnant, answored that it better suited Saracens and idolaters than Christian men.

"The custom does indeed come from the Moors," answered Burdett, "but the Castilians have also adopted it as the best guarantee for the fidelity of their wives. Take the judgment of King Mohamed, whom chance has brought hither as a witness."

The King of Granada who had been waiting in the grove to take leave of his daughter, had been directed to the Morabethin by Pierce Neige, who told him that Aixa waited there for him.

"Sir King," said Burdett to him, "every woman surprised with her lover in a private enclosure, does she not belong to the hangman?"

"It is an ancient and rigorous law, which the Knights of the West may ridicule," answered Mohamed, "but in Andalusia and Africa it is respected as holy. Our wives dread shame more than death. The king himself cannot efface the guilty name from the parchment of the hangman. If she be a maiden, and on the same day a man presents himself rash enough to marry her, and bind himself to pay a fine annually and in advance, she may escape punishment. But for a married woman there is no chance of escape." -

Burdett now called to Juan, the hangman, to do his duty.

At that order, Juan placed his hand on the roll of parchment suspended from his girdle. and beckoned his two assistants to follow him. Burdett then advancd, after him the Black Prince, then the Moorish king, and the lords and barons.

The executioner, on arriving in the middle of the building, perceived a woman, closely veiled, and wearing a Moorish tunic, lying apparently dead on the floor; he lifted her up, and partially recovering, she passed her hand over her brow; she saw the crowd that surrounded her. her recollection returned, and remembering only that Rachel had escaped her snare, she made an effort to spring in pursuit of her rival.

The Late Comer brutally seized her arm and said, "I respect the veil in which a chaste and faithful wife envelopes herself, but I tear off that which serves to hide only her shame ;" and he tore the veil into shreds. "Aixa !" he exclaimed, retreating in consternation.

"My daughter !" exclaimed Mohnmed, in a voice trembling with surprise and grief, while murmurs arose from the English and Gascon barons, not less astonished at this singular denonement. "So, sir," said the Black Prince to Burdett,

th evident displeasure. ' "it seems to me tha

Meanwhile the Black Prince, Burdett, and | thou, and how dost thou explain thy presence in this place?" "By what right," repeated Ruy, with wellfeigned embarrassment, "I cannot tell. Tor-

ture me if you will, but you shall not draw a word from me which shall criminate the daughter of Mohamed." "Tako caro, fellow," said the Late Comer,

"thou refusest to reveal the motive of thy interview with the Morisca, thy very silence accuses her."

(To be continued.)

ON THE SENSE OF PAIN.

The sense of pain in the mouth guards the throat; in the stomach it affords a warning against improper food ; and, in fact, every part of the body is susceptible of pain, where ever that sense is necessary to indicate disease or injury ; but the heart, the brain and the lungs, although the most vital organs, being protected from injury by the sensibility of the exterior parts of the body, a high sense of pain in them is unnecessary, and they are almost insensible to it. The heart beats upwards of 4000 times in an hour; and if the pain from a diseased heart were very acute, it would indeed be ead for the sufferer; but the pain from a disease of that organ is seldom more than an uncasy sensation, and this more expecially after violent exertion, being a check to unnecessary action, and so far useful. Sudden death often occurs from disease of the heart ; not from the heart being suddonly diseased, but from the disease causing very little pain, and being therefore unknown. The brain, although the source of sensation, is itself insensible to pain ; in surgical operations portions of the brain have been removed without the patient exhibiting any sign of pain. The lungs are highly susceptible of impurities in the air, and thus we are guarded against the inhalation of injurious gases ; their sensibility during inflamation indicates the danger and compels the necessary care, but they are almost insensible to pain from mutilation or decay; in such cases the pain would be use less and an affliction. The lungs have been cut without causing pain, and during their decay in consumption the pain is very slight.

BELIEVE IN YOURSELF.

It is said that when John C. Calhoun was in Yale College he was ridiculed by his fellow students for his intense application to study. "Why, sirs," he replied, " I am forced to make the most of my time that I may acquit myself creditably when in Congress." A laugh followed, when he exclaimed. "Do vou doubt it? I assure you if I were not convinced of my ability to reach the National capital within the next three years, I would leave College this very day !" Let every young man thus have faith in himself, and earnestly take hold of life, scorning all props and buttresses, all crutches and life preservers. Let him believe, with Pestalozzi, that no man on God's earth is either willing or able to help any other man. Let him strive to be a creator, rather than an inheritor-to bequeath, rather than to borrow. Instead of wielding the rusty sword of valorous forefathers, let him forge his own weapons, and conscious of the God in him and the Providence over him, let him fight his own battles with his own good lance. Instead of sighing for an education, capital or friends, and declaring that "if he only had these, he would be somebody," lot him remember that as Horaco Greelev said, he is looking through the wrong end of

the telescope ; that if he only were somebody, he would speedily have all the boons whose absence he is bewailing. Instead of being one of the foiled potentialities, of which the world is so full-one of the subjunctive heroes, who always might, could, would or should, do great things, but whose not doing great things is what nobody can understand ; let him be in the imperative mood, and do that of which his talents are indicative. This lesson of self-relionce once learned and acted on, and every man will discover within himself, under God, the elements and capacities of usefulness and honor.-Getting on in the World.

delicate marble tints; the sun turns it dark. A part of the skin bruised or rubbed remains black, without growing white in the dark. Bruck satisfied himself, moreover, that temperature does not affect these phenomena. We take this account from a fascinating article on "Light and Life," translated from the French of Fernand Popillon, and published in the Popular Science Monthly for January. The iridescent hues of fishes may be explained in a similar way.

WONDERS OF MINUTE WORKMAN-SHIP.

In the twentieth year of Queen Elizabeth, a blacksmith named Mark Scaliot made a lock consisting of eleven pieces of iron, steel and brass, all of which, together with a key, weighed but one grain of gold. He also made a chain of gold, consisting of forty-three links: and having fastened this to the before-mentioned lock and key, he put the chain about the neck of a flea, which drew them all with case. All these together, lock and key, chain and fica, weighed only one grain and a half. Oswaldus Norhingerus, who was more famous even than Scaliot for his minute contrivances. is said to have made 1,600 dishes of turned ivory, all perfect and complete in every part, yct so small, thin and slender that all of them were included at once in a cup turned out of a peppercorn of the common size. Johannes Shad, of Mitelbrach, carried this wonderful work with him to Rome, and showed it to Pope Paul V., who saw and counted them all by the help of a pair of spectacles. They were so small as to be almost invisible to the eye. Johannes Ferrarius, a Jesuit, had in his possession cannons of wood, with their carriages, wheels and all other military furniture, all of which were also contained in a pepper-corn of the ordinary size. An artist named Claudius Gallus made for Hypolytus d'Este, Cardinal of Ferrara, representations of sundry birds sitting on the tops of trees, which, by hydraulic art and secret conveyance of water through the trunks and branches of trees, were made to sing and clap their wings, but at the sudden appearance of an owl out of a bush of the same artifice they immediately became all mute and silent.

BLAST FURNACES.

From the earliest times, as among the native miths of Africa to-day, the blast of a bellows has been used in working iron to increase the heat of the combustion by a more plentiful supply of oxygen. The blast furnace is supposed to have been first used in Belgium, and to have been introduced in England in 1558. Next came the use of bituminous coal, urged with a blast of cold air. But it was not till 1829 that Neilson, an Englishman, conceived the idea of heating the air of the blast, and carried it out on the Muirkirk furnaces. In 2 year he obtained a patent for his process, and found that he could from the same quantity of fuel make three times as much iron. His patent made him very rich; in one single case of infringement he received a checque for damages for one hundred and fifty thousand pounds. In his method, however, he used an extra fire for heating the air of his blast. In 1837 the idea of heating the air for the blast by the gases generated in the process was first practically introduced by M. Faber Dufour at Wasseralfingen in the kingdom of Wurttemberg.

In this country, charcoal was at first used universally for smelting iron, anthracite coal being considered unfit for the purpose. In

VERMICULAR PROWESS.

Quite a large number of persons were yes torday morning assembled at the De Groot House, in Fourth avenue, to witness the feeding of a boa-constrictor belonging to Mr. Parks. The animal had had nothing to eat for over two weeks, and was consequently in a condition of hunger which served to make the exhibition quite interesting. It is kept in a box with a glass top, placed directly in front of a register, whereby it recoives a degree of heat reminding it to some small extent of its native African climate. When this box was drawn out into the centre of the room and the cover raised, the lengthy snake-more than seven feet long-slowly crawed around the interior, his neck hardly thicker than a man's wrist, and the rest of the body comparatively attenuated. In one corner of the apartment was a basket containing four snow-white rabbits, nibbling and munching their food, totally unconscious of their approaching fate. The largest of these was first given to the snake. Still slowly crawling, the thin neck kept constantly moving around the box, while the rabbit cowered as though dreading he knew not what. Soon the snake saw him. Gathering back nearly a foot he waited for a chance to strike. Just then the rabbit turned his head and approached, as he had several times done before, to touch the snake's head. The small eyes gleamed, the narrow forked tongue shot in and out like a whip-thong, and in an instant, quicker than the watching eye could follow the motion, the reptile caught him by the nose. At the same moment the long, slim body was wrapped around the rabbit in three folds. Tightening quickly, the skin of the snake become rough and corrugated ; it glistened with a strange, shiny lustre not hitherto observable, and was wrinkled into numberless little circling rings. "Bunny" uttered no squeak, gave no signs of vitality, with the exception of a single convulsive kick. He was evidently suffocated soon after the catching ; but he felt no pain and died easily. For some minutes the snake stayed thus, the folds contracting, the skin becoming rougher, and the lustre deepening. Then the small, leathery head drew back from the circumvolved rabbit, and the keon, bright eyes regarded it curiously. The folds contracted more and more, until poor Bunny seemed to be longer by half than nature had fashioned him. So prepared for swallowing, the snake commenced that operation. Contrary to the popular opinion, he did not cover the animal with saliva, but began absorbing him without further ceremony. The lower jaw dropped, extending to quite twice its natural size, and the rabbit's head was gently sucked in. Next, the sking seemingly loose, wrinkled into irregular creases near the neck, as if the snake were shrugging his shoulders. As these wrinkles straightened out, the rabbit disappeared down the gaping jaws. Slippingly it glided away until there was left of it nothing but the tail and hind legs. A final gulp and these, too, were gone. The wrinkles still crawled and crept over the snake's skin, while his food could be plainly seen passing down his body. A rest was now given him, though shortly his movements and the swift darting of the tongue, showed him to be ready for further food. Again a rabbit was put into the box, but although once struck showed such skill in dodging the snake that by unanimous desire of the spectators he was taken out and restored to his former state of unthinking happiness. . The next one was effectually seized. Escaping the stroke, the rabbit fled to a corner, but in an instant was

grasped by the hind leg and enwrapped in thick coils. The operation did not occupy

She cast herself like a furious itoness on this barrier, and while she tore her hands in fruitless efforts to remove it, the miner whispered some words in the car of the king ; the countchance of the latter lighted up with joy.

Then they heard the blows of a hatchet on the door, and an immediate breach was expected.

"You were curious to know how the hangman would enter," said the Morisca, insolently.

Rachel remained cold and immovable as a statue, but the king answered, "We shall no more see how he will enter than thou wilt see how we depart."

At these words, Ruy, the mower, advanced, and locking the Morisca in his long, bony arms, wrapped his cloak around her head and face: This feat was performed with such doxterity, that Aixa had not time to utter a single cry, and while she struggled in vain to extricate herself, her voice was stifled in the folds of the cloak.

Meanwhile, Perez, lodging his pickaxe in a large iron ring, raised a heavy stone, and discovered a staircase, which led down to the ancient caverns of the mosque.

"Go forward, brother," said he.

The king drew Rachel down more dead than alive, the brothers following, Perez having taken the precaution to break off the iron ring.

They were only just in time, for hardly had the trap-door descended, when the door of the Morabethin gave way. Ruy released the Morisca, saying to her,-

"Noble dame, when the heron is out of sight, we may safely unhood the hawk."

Aixa scoing herself alone with the mower, sprang with a furious bound to the bottom of the Morabethin, raving like a maniac. Having assured herself that Rachel and the king had escaped, and seeing her revenge foiled at the instant of fruition, she fell fainting on the floor.

you accuse your wife and my noble ally very lightly."

"Sire," stammered Burdett, "here is some mystery which I will not rest till I have found out." Then approaching the Morisca, he said, in a deep voice, "Hast thou, peradventure, been playing on my credulity, in order to avenge thyself for thy capture? It is a hazardous game, I warn thee ; thou didst promise to discover Rachel and her lover to me, and I charge thee to keep thy word."

Aixa, pressing her forehead with her hands. regarded her master with haggard eyes; at length she murmured, "Rachel has disappeared ; she has fied with Don Pedro : they have both escaped."

"It is false !" replied Burdett, "for I watched at the door of the Morabethin, and no one passed out."

"They escaped, nevertheless, I tell the." resumed she, in a hurried and broken voice, 'by what miracle I know not. They were here but now, pale and trembling before me ; Rachel tore herself from the arms of her lover -I see her still-and knelt at my feet. They tried entreaty, despair, anger, to move me, but I was inflexible ; already had I called on the hangman to finish his work, when, suddenly, one of the king's companions wrapped his cloak about me, and, when I got free, I sought in vain for Don Pedro and Rachel."

"Oh, I am not the dupe of such a flimsy tale," said the Late Comer, wringing the arm of Aixa, who uttered a shrick of vain. Mohamed, with his hand on his poignard, was advancing to protect his daughter, but already another had cast himself between her and her brutal master. It was Ruy, the mower. "Pardon the poor girl," said he, "I am the

only guilty person ; let me alone be punished." The despair of Aixa increased on recognising the king's foster brother as her defender.

"By what right demandest thou pardon for my slave ?" said Burdett, irritated ; "who art ness blanches it ; twilight gives it the most can.

THE COLORS OF THE CHAMELEON.

This animal experiences very frequent modifications of color in the course of a single day. From Aristotle, who attributed these changes to a swelling of the skin, and Theophrastus, who assigned fear as their cause, to Wallisnieri, who supposes them to result from the movement of humors toward the surface of the animal's body, the most different opinions have been expressed on the subject. Milne-Edwards, thirty years ago, explained them by the successive inequalities in the proportion of the two substances, one yellowish and the other violet, which color the skin of the reptile-inequalities due to the change in volume of the very flattened cells that contain these substances. Bruck, renewing these researches, proves that the chameleon's colors follow from the manifold diffusion of solar light in the colored cells-that is to say, from the production of the same phenomenon remarked in soap bubbles, and all very thin plates or fibres. Its colors, then, come from the play of sunlight among the yellow and violet substances distributed very curiously under its wrinkled skin. It passes from orange to yellow, from green to blue, through a series of wavering and rainbow-like shades, determined

1820 an unsuccessful attempt to use it was made at Mauch Chunk. In 1823, Frederick W. Geisenheimer, of Schuylkill, obtained a patent for the use of the hot blast with anthracite, and in 1835 produced the first iron made with this process. In 1841, C. E. Detmond adapted the consumption of the gases produced by the smelting to the use of anthracite ; and since it has become quite general, and has caused an almost incalculable saving to the community in the price of iron.-Lip. pincott's Magazine.

IRON IN THE FUTURE.

It is fortunate that we attended to our own interest in our own way, and that we are now in a position to go ahead to any required extent in the iron trade. As we export locomotives to Russia and Germany, so we expect in due time to export iron to all Europe, just as we now do cotton and provisions. We shall not rest satisfied until we do this; for when that point is reached the great contest will be ended, and American iron will be master of the field as clearly as American cotton now is. It is not the increase of the breadstuff exports that we should now turn our attention to, for in that line Russia, Germany and the Mediterranian countries are our formidable rivals. But we should build ironworks all over the Northwest; turn wheat into iron, and instead of shipping pigs of pork ship pigs of iron. See what this industry has already done for the West. The census of 1870 shows the product of manufactures in these States thus : Ohio, \$269,713,610 : Indianna, \$108,617,278 Illinois. 205.620.672 ; Missouri, \$06, 213, 429 ; Michigan, \$118,394,676 ; Wisconsin, \$77,241,326. And all this rests upon the remarkable growth and prosperity of the Western Iron manufacture, as is seen in the fact that the largest inby the state of the lightest radiation. Dark- crease is in the iron districts .-- North Ameri-

more time than would a flash of lightning. With a few faint squeaks the rabbit was dead, and was leisurely swallowed like his predecessor. Although four were provided. only two wore eaten, and having accomplished the deglutition of these, the snake cared for no more. As an incident in observation of natural history, the sight was entertaining, and all the more so that the rabbits were killed so suddenly that their suffering was almost nothing .-N. Y. World.

BE FIRM.

Let the winds blow, and the waves of society boat and frown about you, if they will; but keep your soul in rectitude, and it will be firm as a rock. Plant yourself upon principle. and bid defiance to misfortune. If gossip, with her poisoned tongue, meddles with your good name-if her disciples, who infest every town and hamlet, make your disgrace the burden of their song, heed them not. It is their bread and their meet to slander. Treat their idle words as you would treat the hissing of a serpent, or the buzzing of many insects. Carry . vourself erect; and by the serenity of your countenance, and the purity of life, give the lie to all who would berate and bolittle you. Why be afraid of any man? Why cower and. tremble in the presence of the rich? Why "crook the pliant hinge of the knee, that thrift may follow fawning ?"

No, friend, fear them not ! Build up your character with holy principles, and if your path be not strewn with flowers, let it be beautiful with the light of divine life, and you will leave behind you a noble example, which will be to the world a perennial flower, whose leaves will be healing to the nations, and its fragrance the panaces of the soul.

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