

The Family Circle.

THE NINETEENTH CENTURY.

BY G. P. CRANCH.

A WONDROUS light is filling the air, And riming the clouds of the old despair; And hopeful eyes look up to see Truth's mighty electricity.

Meantime, while thousands wrapt in dreams Sleep, heedless of the electric gleams, Or ply their wonted work and strife,

GRACE ROCHE'S LEGACY. CHAP. IV.

By the Author of Margaret and her Friends. A few months after the events recorded in the last chapter, Mrs. Burton, the wife of the farmer who lived nearly opposite to Grace Roche's cottage, went into her dairy one afternoon, and found the dairymaid and one of the farming-men engaged talking about Grace Roche, who had not been for her pint of milk that day—and they were certain something was amiss.

"I'm sure she must be very bad, ma'am, for I've been dairymaid here seven years, and I never knew her to miss once. Summer or winter—wet or dry—it made no sort of difference to her;—and as I was saying to Jem, here, when you came into the dairy just now—Jem, says I, 'I didn't like the noise that dog of hers made last night; and Jem was telling me what he saw, as he was a coming home from the village last evening, wasn't you, Jem?'"

"Wouldn't it have been kinder and more sensible, if, instead of talking about what you both saw and heard, you had gone over to the cottage to enquire after Grace?" said the sensible farmer's wife. "Whatever her character may be, it is our duty to help any poor fellow-creature in distress or illness. It is very likely that, whilst you have been gossiping here, Grace Roche is dying—perhaps dead. I wish you had told me of it earlier in the day; but as it is, no time must be lost. Go over to the cottage at once, Jem, and see if you can make any one hear; and I will send off a man on horse-back for Dr. Clay."

The farmer's wife was leaving the dairy as she spoke, when she saw that Jem was standing still.

"Did you hear me, Jem?" "I be afeared to go, ma'am."

"Sally can go with you, to protect you," said his mistress, smiling, and turning to the dairymaid.

But Sally turned pale at the bare idea, and begged her mistress not to ask her to go.

There was no time to stay and attempt to reason them out of their absurd fears; for Mrs. Burton felt that the life of a fellow-creature was at stake; and having sent the man to the village for the doctor, she put on her bonnet and prepared to go over herself to the cottage of Grace Roche. It was quite true what the dairymaid had said about Grace's punctuality in her visits to the farm. Years ago, they had offered, in a kind spirit to send the milk over to her in bad weather; but the offer had been most ungraciously declined—"No, no, she would come herself, and see it measured, and then she couldn't be cheated!" And she had come every morning, for more than twenty years. No wonder that her absence this one day made her kindly neighbors fear that some evil had befallen her.

When Mrs. Burton entered the gate leading into Grace's garden, the one-eyed dog began barking and howling furiously. The farmer's wife was fond of dumb animals; and, having lived amongst them all her life, she understood a great many of their ways. She had a kind and gentle voice, and going up to the kennel where the dog was chained, she patted him on the head, and spoke softly to him. The gentle tones of her voice had a soothing effect on the poor animal, who seemed to feel that he had a friend to deal with. The loud barking ceased at once, but the piteous howling continued, as if the dumb creature would have faint told all his anxiety about his old mistress.

Having thus calmed the dog, Mrs. Burton turned towards the door of the cottage. It was locked, as usual. She knocked, gently at first; and then louder; and, receiving no answer, louder still. The faint mewling of a cat was the only sound she heard in reply. She tried to look in at the window, but a dingy curtain drawn across it on the inside prevented her from so doing. Convinced more than ever that something must have happened to Grace Roche, Mrs. Burton returned to the farm, and tried to persuade Jem to bring his tools and force open the door of the cottage, but no inducements, nor even threats, could prevail on Jem to stir a step in the matter, more particularly when he heard his mistress mention the mewling of the cat. "He'd have nothing to do with that cat nor its mistress neither."

Mrs. Burton was at a loss what steps to take, for her husband and all the other men were at work on a distant part of the farm. It was a great relief to her when she saw the doctor's grey cob trotting up the lane. Dr. Clay was not quite so fresh and strong as he had been when sent for, long ago, to set Grace Roche's broken finger. Twenty years had not passed, over even his happy genial nature, without leaving their traces behind. The "snowfalls of time" had descended on his head, and he now rode along the green lanes on a sturdy grey pony, instead of walking, as he used to do in former days. But his heart was as young—his nature as kindly as ever—and the poorest person felt, when sending for Dr. Clay, that he was sure of receiving as prompt and as constant attention as if he had been the squire himself.

He would frequently say that he looked upon himself as second only to the clergyman of the parish, in the importance and responsibility of his office. A sincere Christian, a warm friend, a kind neighbor; such was Dr. Clay, and such are many of the members of his noble profession.

Mrs. Burton was at the gate of the farm when his pony stopped. A few words told him how matters stood.

"No more time must be lost," he said; "we must get into the cottage at once. Let your man there bring his tools and come over with us."

Dr. Clay looked towards Jem as he spoke. "Jem's afraid," said Mrs. Burton.

"Afraid, is he?" roared the doctor, in a voice of thunder, and darting on Jem, at the same time, all the power of his piercing eye. "And so you'd allow a fellow-creature to perish, rather than strive to overcome your senseless fears! Listen to me, you cowardly fellow! Get your tools and come over with us, this instant; or, should anything happen to yonder poor woman, I'll have you brought up at the next quarter-sessions, as sure as your name is, Jem Price."

Dr. Clay was a magistrate, and Jem knew it; moreover, the doctor's voice and manner had so completely overawed him, that he went at once for his tools; and prepared to accompany his mistress and Dr. Clay to the cottage.

It did not require any great strength or skill to force the simple lock; and, in a few minutes, the door was open. This was no sooner done, than Jem prudently retired behind Dr. Clay and his mistress; both of whom went into the cottage, leaving the gallant Jem, outside in the little wooden porch.

The room was very small and dark; and was so filled up with lumber of various kinds, that there was scarcely space to move. Mrs. Burton drew back the curtain which hung before the window, and they had now light enough to distinguish one object from another. Grace Roche was lying, to all appearance, dead, on a miserable bed in one corner of the cottage; and the black cat was crouching on the pillow, close to the old woman's head. It was mewling piteously. Let no one think that cats are not capable of attachment; for there are well-authenticated stories to prove that they are.

The doctor bent over the old woman, and felt her pulse. "She is not dead," he exclaimed, producing at the same time a lancet from his pocket; and giving Mrs. Burton directions to procure some restoratives from the farm, as soon possible. "Tell Jem to come to me," he added, as the farmer's wife was leaving the cottage. Jem dared not disobey, but advanced, trembling from head to foot, more especially when he found himself face to face with the black cat, who still kept its post on the pillow of its mistress.

Dr. Clay pointed to the cat.

"That poor dumb animal has more kindness in its nature than you have!" said he, sternly, as he gave Jem a basin to hold.

When Mrs. Burton returned, a few moments afterwards, she found something like a look of returning consciousness on Grace's face; whilst the blood was flowing slowly down from her arm.

Dr. Clay poured a little wine into her mouth. She heaved a deep sigh, and gazed wildly around her.

"Should we not send for her relatives?" whispered the doctor, to Mrs. Burton.

"Andrew Roche left home this morning to attend the markets at Oldford," she replied; "he called on my husband before he went; but there are her nephews—shall we send for them?"

The latter words seemed to have caught the ear of the old woman. She attempted to raise herself in the bed, but sank back again exhausted. Something, it was clear, she wished to say; but her speech was affected; and it was some moments before she was able to articulate.

"Yes—send—my—nephew—"
"We will send for them both," said Dr. Clay, in a slow and distinct voice.
But Grace had again fallen into a state of unconsciousness, and seemed not to have heard his words.

Some time elapsed before the young men arrived, as they had been both from home when the message came; but Nanny had taken her post within an hour from the time she had been sent for, and had thus relieved Dr. Clay, who promised to look in again in the evening; having given full directions for the treatment of Grace.

Mrs. Burton kindly offered to remain until Frank and Geoffrey should arrive.

As Dr. Clay went home, he told Mr. Kelly about Grace's serious illness; and the clergyman promised to call and see her sometimes in the course of the evening.

Grace Roche had spoken no word since she had expressed a wish that her nephew should be sent for, but lay in a heavy stupor with her eyes closed.

The day was drawing on, and the comfortable looking cottage, with the shades of twilight deepened around it, would have formed a study for an artist. The low ceiling seemed lower than it really was, by having strings passing across it, from one end of the room to the other, to which were suspended paper bags full of dried herbs. In some places these bags hung down so far as to prevent any one standing upright.

A shelf at one side of the fire-place was filled with odd bottles of all shapes and sizes, and a pestle and mortar, and two or three small saucepans stood on the mantel-shelf. The sharp worn features of Grace, herself, as she lay amongst her rags, on her miserable bed, contrasted with the smooth plump face of old Nanny Wilkes, who, in her chintz flowered gown and neatly plaited cap, was rocking herself to and fro on a rickety chair; as she sat knitting a stocking by the bedside of her patient. And thus time wore on. Mrs. Burton, who had taken possession of the only sound chair in the cottage, and had become on most friendly terms with the poor black cat, which sat purring on her lap, was beginning to be uneasy at the delay of the young men, when hasty steps were heard approaching the door. It was Frank and Geoffrey Roche, accompanied by the kind pastor, whom they had met on the way. A few words were spoken to Mrs. Burton in the porch, and then the two cousins found themselves, for the first time in their lives, beneath their aunt's roof. It was utterly impossible that they could feel anything like warm affection for one who had never shown the least kindly feelings towards them; yet it was not without emotion, mingled with awe, that the young men gazed upon their unhappy aunt, surrounded by such self-imposed misery. She did not seem to know them, for there was the same stony look on her sharp face, the same fixed meaningless stare in her eyes.

Frank thought of another death-bed scene he had witnessed not very long since, and of the contrast between the peaceful trusting close of the old miller's well-spent life, and the hopeless expression on his aunt's countenance, as she lay with her face upturned to his. And Geoffrey? His thoughts wandered back to the closing scenes of his father's life, and to the dark shades which had fallen upon it. Perhaps he felt, too, how nearly that shadow had crossed his own path. Some reflections of the same kind must have passed through the clergyman's mind, as he glanced from Geoffrey's pale and thoughtful face, to the senseless form of the miserly old woman; and, as if thinking aloud he murmured, "How hard it is for them that trust in riches to enter into the kingdom of heaven." Then turning towards the young men, he added, earnestly: "The last day alone will fully prove how true those words are. Let us watch and pray against the love of money. It is a snare for the poor as well as the rich. Let us pray for contentment, with such things as we have; and believe that riches are, at best, a perilous possession, binding heavy burdens on the heart, and leading into many temptations. 'In all times of our wealth, good Lord deliver us.' For though the word 'wealth' there stands for 'weal,' or well-being, the opposite of 'tribulation,' yet, in many cases, we may use the prayer about wealth in its common meaning of money."

"What talks of money?" murmured Grace; a momentary ray of consciousness fitting across her face. Her eyes wandered round the room to where Frank was standing at the foot of the bed, with the light of the candle shining full on his face. He was in person, very like what his father had been twenty years before. The same ruddy complexion, the same bright blue eyes, the same good humored expression. His aunt gazed earnestly at him, and a scowl passed over her face.

"Go home, go home," she cried. "Didn't I say that neither you nor yours should ever touch a penny of my money?"

Frank moved aside to speak to Mrs. Burton, who saw at once that in the wandering state of her mind, Grace had mistaken Frank for his father; and as he drew back, the light fell on Geoffrey, who had been standing behind his cousin.

"You, Geoffrey Roche, are my heir," she exclaimed, in a voice trembling with excitement. "It is a good legacy—all—all—all—"

Her voice grew so faint as she uttered the last words, that they could only just be heard; and they were no sooner spoken than she sunk back into her former state of unconsciousness.

[TO BE CONTINUED.]

WHAT A USELESS LIFE I LEAD!

With mournful tone this was uttered by one of the humblest and best Christians we ever knew. She believed this, but she was mistaken. She was a cripple, and had been so from childhood. Condemned to a fixed position, and seeing others going about on their mission of love and good works, she sighed and thought, what a poor, useless being I am! But no; God had assigned to her a lot which she had accepted, with resignation to His will; and all who saw her, marked the sweet, submissive spirit with

which she bore her trial, were struck with the power and excellency of that faith which could say, "Thy will be done." A look at her, and a look from her, was a sermon. She was doing good by the passive virtues of a religion which put submission as the central gem in its diadem.

Her vocation in the service of Christ was not to go from house to house with the tract and the Bible. It was not to attend prayer-meetings and other social gatherings for the advancement of religion. But to suffer God's will—to meditate—to pray in secret.

But this wasn't all. In that quiet seclusion she kept her fingers going in work for Christ's poor. She had a word of encouragement for the disconsolate who called upon her. She even became an agent for the circulation of a religious paper. Useless! No, not she. We wish all our readers were at work for Christ as this dear invalid is. How the Church would brighten if such were the case! Our duties are modified by our circumstances. If vigorous and well, we must go about doing good; if nailed to the sick couch, then and there let our religion show its power to sustain, as before it did to energize and impel our zeal and good works.

THE REST NEEDED BY HEAD-WORKERS.

Head-workers need more rest than hand-workers. The old saw precisely inverted the proprieties of the case, so far as it involved them, declaring that "seven hours' sleep suffice the student, eight the laboring man, and nine the fool." Three hours of hard brain-work destroy, as before observed, more nervous tissue, and cause a greater subtraction of the phosphates from the system, than an ordinary day's work at mere mechanical labor, the proportion in grains (of weight) being as 80:77. Above every thing else, brain-workers need sleep; early sleep and late sleep, and enough in the middle to feel "real stupid" at the end of it. Stupidity is precisely the condition into which this class of toilers should manage and devise and strive to get themselves for a time, longer or shorter, each twenty-four hours. Nothing rests the brain and the whole working system like it. Narcotic stupidity, the product of ale, tobacco or wine, is not the thing referred to—though in emergencies this may perhaps be had recourse to as a medicine—but the quiet, restful readjustment of the nervous conditions and the recharging with vital force of the nerve-batteries, the contacts not yet closed, the galvanic currents therefore not yet set in motion, but only filling up the system with a blind, diffused, feeling of heavy sensations and reserved efficiency.

In particular, it is believed that all workers, both men and women, in all departments of labor, and especially in the department now in debate, will find it greatly to their advantage to lie down, for a time longer or shorter, during the day, preference being given to the hour after dinner, and to lie long enough, if possible, to just fall asleep. Every other working animal than man, if left free, will, after having eaten at noon, lie down for a nap, or, if from any cause it fails to get it, shows decided abatement of efficiency for the rest of the day. Judicious teamsters teach their horses to lie down in their stalls, or compel them to, and many have to be compelled to in such narrow quarters that they are liable to chafe or wound themselves in getting down or up. In a recumbent posture the pulse is slower by eight or ten beats a minute than in standing, and four or five slower than in sitting; the breathing also is less rapid, and is deeper; digestion begins sooner and progresses more rapidly. Accordingly, the worker can recuperate faster in the recumbent than in any other position; and if in a quiet place his nerves get composed more speedily and thoroughly in a given time. Working-people understand this well enough, but not "feeling tired," they hate to camp down on a bed or settee, it is such dull business. Dull enough truly when the head is swarming with plans, work is ready to go on, and the worker feels ready to go on with it. But it pays well—this is our argument—it pays well by the day, month, year or lifetime, and for the great majority of workers.—Lippincott's Mag.

Scientific.

LIMITS OF MATERIALISM.

From the Inaugural Address of Prof. Tyndale, before the British Association for the Advancement of Science, we copy the following instructive paragraphs, which show to what great lengths speculators in natural science expect their investigations to be carried in the most abstruse regions of inquiry, and yet how impossible they themselves are compelled to admit are the barriers between matter and spirit, and how insoluble the simplest problems of being and of consciousness to their most refined analysis:

"You see I am not mining matters, but avowing nakedly what many scientific thinkers more or less distinctly believe. The formation of a crystal, a plant, or an animal, is in their eyes a purely mechanical problem, which differs from the problem of ordinary mechanics in the smallness of the masses and the complexity of the processes involved. Here you have one half of our dual truth; let us now glance at the other half. Associated with this wonderful mechanism of the animal body we have phenomena no less certain than those of physics, but between which and the mechanism, we discern no necessary connection. A man, for example, can say, I feel, I think, I love; but how does consciousness infuse itself into the problem? The human brain is said to be the organ of thought and feeling; when we are hurt the brain feels it, when we ponder it is the brain that thinks, when our passions or affections are excited it is through the instrumentality of the brain. Let us endeavor to be a little more precise here. I

hardly imagine that any profound scientific thinker, who has reflected upon the subject, exists, who would not admit the extreme probability of the hypothesis, that for every fact of consciousness, whether in the domain of sense, of thought, or of emotion, a certain definite molecular condition is set up in the brain; that this relation of physics to consciousness is invariable, so that, given the state of the brain, corresponding thought or feeling might be inferred; or giving thought or feeling, the corresponding state of the brain might be inferred. But how inferred? It is at bottom not a case of logical inference at all, but of empirical association. You may reply that many of the inferences of science are of this character; the inference, for example, that an electric current of a given direction will deflect a magnetic needle in a definite way; but the cases differ in this, that the passage from the current to the needle, if not demonstrable, is thinkable, and we entertain no doubt as to the final mechanical solution of the problem; but the passage from the physics of the brain to the corresponding facts of consciousness is unthinkable. Granted that a definite thought, and a definite molecular action in the brain occur simultaneously, we do not possess the intellectual organ, nor apparently any rudiment of the organ, which would enable us to pass by a process of reasoning from the one phenomena to the other. They appear together, but we do not know why. Were our minds and senses so expanded, strengthened and illuminated as to enable us to see and feel the very molecules of the brain; were we capable of following all their motions, all their groupings, all their electric discharges, if such there be, and were we intimately acquainted with the corresponding states of thought and feeling, we should be as far as ever from the solution of the problem. How are these physical processes connected with the facts of consciousness? The chasm between the two classes of phenomena would still remain intellectually impassable. Let the consciousness of love, for example, be associated with a right-handed spiral motion of the molecules of the brain, and the consciousness of hate with a left-hand spiral motion. We should then know when we love, that the motion is in one direction, and when we hate that the motion is in the other; but the 'why?' would still remain unanswered.

"In affirming that the growth of the body is mechanical, and that thought, as exercised by us, has its correlative, in the physics of the brain, I think the materialist will be able finally to maintain this position against all attacks; but I do not think, as the human mind is at present constituted, that he can pass beyond it. I do not think that he is entitled to say that his molecular groupings and his molecular motions explain everything. In reality they explain nothing. The utmost he can affirm is the association of two classes of phenomena, of whose real bond of union he is in absolute ignorance. The problem of the connection of body and soul is as insoluble in its modern form as it was in the pre-scientific ages. Phosphorus is known to enter into the composition of the human brain, and a courageous writer has exclaimed, in his trenchant German, 'Ohne Phosphor kein Gedanke!' (That may or may not be the case; but even if we knew it to be the case, the knowledge would not lighten our darkness. On both sides of the zone, here assigned to the materialist he is equally helpless. If you ask him whence is this matter of which we have been discoursing, who or what divided it into molecules, who or what impressed upon them this necessity of running into organic forms he has no answer. Science also is mute in reply to these questions. But if the materialist is confounded and science rendered dumb, who else is entitled to answer? To whom has the secret been revealed? Let us lower our heads and acknowledge our ignorance and all. Perhaps the mystery may resolve itself into knowledge at some future day."

GEOLOGICAL RESTORATION.

Mr. B. Waterhouse Hawkins, the distinguished English naturalist, well known as the author of the thirty-six restorations of extinct animals which add so much interest to the Crystal Palace, London, says Lippincott for November is now in this city. Having concluded arrangements with the Commissioners of the Central Park, N. Y., for a similar series of restorations, Mr. Hawkins is engaged in studying the immense fossil reptiles, the remains of which are deposited in the museum of our Academy of Natural Sciences. It is his intention to erect in the Central Park restored figures of *Laelaps aquilunguis* (Cope), *Hadrapsaurus Foulkii* (Leidy), and *Elasmosaurus platyrus* (Cope). They will be disposed, we believe, as a group of four, there being two figures of the first named animal, in the centre of a grand geological saloon to be erected in the Park. The work when completed will give an extraordinary impetus to the study of Geology, as the room, if the idea is fully carried out, will afford facilities for pursuing the study of that science to be found at present nowhere else on this continent.

As an acknowledgment of his indebtedness to the Academy for free access to the magnificent collection of fossil remains in its possession, Mr. Hawkins proposes to erect in their natural relations the bones of *Hadrapsaurus*, which are now lying in an obscure dark case of the museum in such condition that very few can realize the immense size of the creature to which they once belonged. We are happy to hear that the Academy has accepted the proposition. The bones will be sustained by iron bars, in the lower museum, probably in front of the skeleton of the whale, and when erected will convey a very accurate idea of the size of *Hadrapsaurus Foulkii*, the equivalent on this continent of the ponderous *Iguanodon* of Europe.