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FAIRY LORE IN THE KITCHEN.

New Dominion Monthly.

NOVEMBER, 1877.

IN SEARCH OF THE SUPERNATURAL.

CHAPTER I.

When I was a little girl living in Ireland the great desire of my life was to see a fairy. I was staying with my aunt, who lived in a country village, near enough to Slemish (*Slieve mis*) to watch him putting on his night-cap of cloud when a storm was brewing.

My education in fairy lore had been neglected. Father said, "The child is too imaginative, her mind must not be filled with lying wonders." My dear mother, who thought she had been injured by such stories in her youth, confined my reading for amusement to Watt's Hymns, and Pollock's and Miss Edgeworth's Tales. I enjoyed them very much; but while I wept over the sorrows of "Helen of the Glen," or wondered at the namby-pamby silliness of Rosamond, I was so little influenced by these authors that I backslid into fairy tales whenever I got the opportunity. I was not tempted at home, where nothing of the kind was ever allowed to enter. I did indeed, once bring home "The Yellow Dwarf," borrowed from one of the pupils at Mrs. Campbell's preparatory school; but our ruling power, the maid, Lizzie Beveridge, flung it into the fire as "bein trash enuech tae pit ony lass bairn wrang i' the head."

When Uncle West came to our house in Edinburgh and borrowed me for a long visit, because he had no little ones of his own, while father had a houseful, I was allowed to go, and I went gladly, and found myself at once in Wonderland.

Uncle had some appointment under Government that had caused him to move about a good deal; so that his home had for a time been in different parts of Ireland, Scotland and even Wales. His sojourn in each place had been long enough to justify him in taking his family with him. The family, when I went to visit them, had been for some time back in their original home in the North of Ireland. They lived in a delightfully rambling old house, full of unexpected places, where any amount of ghosts might be hidden away. It was covered with ivy, and Mary O'Neil, the ruler over aunt's house, told me that the banshee never cried round a house that had "no coverin' of ivy to show its ancientness."

Mary liked her mistress, and was loyal to the family as an Irish servant should be—had followed them in all their removals; but deep down in her heart she nourished a pride of the name she bore, and a belief that if ever the banshee cried round uncle's, it would not be for any of the family, but for herself,

"come of the gran' ould race an' entitled to the fine ould name."

Besides Mary O'Neil, and a slip of a girl to help her, who spoke as broad Scotch as if she had come from *Glaisga*, though she was thoroughly Irish in every other respect, there was William O'Hara, the gardener, who also drove the car and did a great many things besides. He was a thin, wiry man, and one of his eyes was white and of no use to him; but the other was a quick, bright eye, dark and funny, and he certainly *saw* more with it than many a man does with two. Uncle had picked him up in far-away Kerry, and he belonged to the family ever since. Mary O'Neil and he quarrelled sometimes. When she was cross she called him "Silver-eye" and he called her "Mother Bunch."

They both joined in flying out at the "slip of a girl," whose name was Bella Wiley, in the most outrageous manner, if she said a word between them when they quarrelled for Mary said she was a stranger just come in for a bit, while they were "residents," whatever she meant by that.

When I came to uncle's first, he gave me a great many story books, in a little box with a sliding lid, that had been his when he was a boy.

"Here, Miss Janetta Nicholson," he said, laughing at my wondering gratitude, "here are some of my favorite authors. Here you may read the melancholy 'History of Cinderella,' and the lamentable tale of 'Bluebeard,' 'The Sleeping Beauty,' 'Beauty and the Beast,' 'The Yellow Dwarf,' and many others equally true and interesting."

I revelled in my books, finding in them the Wonderland I had longed for but never entered. Before I had exhausted them I discovered that as wonderful stories were told around the kitchen fire by William O'Hara and Mary O'Neil, and the stories they told they believed in entirely themselves.

Aunt West, although she indulged me very much, disapproved of my staying in the kitchen—not for fear I would listen to fairy stories, for I think she half believed them herself—I know that she believed in banshees—but for exclusive reasons, lest I might acquire Mary's vulgar manner of speaking or William's Kerry brogue; and William had enough and to spare of the rich Kerry brogue—could have supplied a dozen little girls.

"It would be too dreadful, Janetta," said aunt, "for you to learn vulgar manners, or acquire a Kerry brogue, you have imitation so large. (I had been mimicking William O'Hara, I am sorry to say). What would your dear mamma think?"

To wean me from the kitchen, aunt made me a present of a beautiful doll, dressed, she said, like the lovely Lady Blessington. Indeed her ladyship's portraits show her in just such a funny cap as my doll wore when in full dress, stuck up in the crown and with Brussels lace side-whiskers. I think my doll was the prettiest, and might have addressed her ladyship in her own verses,

"Who'd rave about my lady,
With her pale and languid face,
If they could see my pink cheeks,
Edged round with Brussels lace?"

I named my doll Lady Blessington. Mary shortened it up to Lady B., and I took great delight in her. But when uncle and aunt were out spending the evening, and it came to be between the daylight and the dark, the kitchen drew me down to it. It was a nice kitchen, had once been small—an apartment in the house, but uncle had enlarged it by building an addition, and took the wall away, leaving a supporting arch between the two portions. There was a very large double window at the further end filled with geraniums, on which Mary bestowed great care.

I knew that when the evening dropped down there was a bright peat fire, with a bit of blazing bog fir in the front, in

the funny corner fire-place; that the candle was lit in the wonderful wooden candlestick, ever so old, brown with age, tall enough to stand on the floor, all carved work, its socket a serpent's head, that opened to receive the candle and shut on it again like a bite. Mary O'Neil sat in one corner in a straw chair which William O'Hara had made for her when he was more than usually good-natured. She was always, I think, darning stockings; I always remember her with one arm enveloped in a sheath of stocking-leg, her fat fist clubbed opposite the weak spot that needed her attention, her basket on the floor at the foot of the long candlestick, "the slip of a girl" on a stool beside her, sometimes knitting, oftener with her back arched and her elbows on her knees looking into the fire. William O'Hara sat in the other corner, reading the "Four Masters" when he was not making or mending a basket. Beside William there was just room for my creepie stool, and very soon I would find myself in my place with Lady B. in my arms.

"Now, Miss Janetta darlin'," Mary O'Neil would feebly remonstrate, "sure I'm to put you to bed whiniver you're tired of your books an' Lady B. Thim's the mistress's orders, dear."

"Oh now, you darling Mary," I would plead, "you know you could not have the heart to do it. You know very well you will be talking about banshees, and they will come up-stairs and frighten me. Aunt did not think of them when she said so; she would not want me to go to bed to watch the window for a banshee."

Mary's authority generally went down before my coaxing, and William would say, "Let the deluderin darlint' stay wid us, and I'll spake to the mistress."

He did so, and aunt allowed me to sit in the kitchen when she and uncle were both out. I settled myself on my creepie, determined to know all that

William and Mary could tell about banshees and fairies.

"William," I said, "why is it that there's no fairies in Scotland?"

"Och, there may be, darlint, in holes an' corners an' out-ov-the-way places. They niver thrive well where there's many Prasbytarians. They have a cowl'd breath, Prasbytarians have, an' they droive off the tinder crathers in green, for they can't stan' the cowl'd."

"I'm very sorry, William. Do you think there's none at all in any corner about Edinburgh, up on the Calton Hill, or down by Holyrood Palace or the Queen's Park?"

"Not in Edinburgh by all places, Miss Janetta. There might be some among the mountains, in glens or lonely, sheltered places in the Highlands. There was wance a moighty wizard in Scotland, a praicher too, as I hear, an' whin he shuk his fisht, or thumped his staff on the flure, ivery fairy in Scotland thrimbled loike a lafe. An' shure they cuddn't stan' to be fritened that way out ov their wits, an' they forsook Scotland an' kem over to Ireland, where the 'God save you kindly' was waitin' for thim."

"William," I said, "you talk most of fairies, and Mary of banshees—how is that?"

"That is aisy tould. Mary belongs to the North, an' the fairies have mostly forsook Ulster for the same raison as they forsook Scotland, an' I come from Kerry, where they linger among the kindly people yet."

"Is that the reason? What are fairies, William?"

"Is it fairies? Och they're crachures. They're powerful in wan way, an' they're young an' tindher in a sinse. They spread and flourish where the ould race is multiplying; they like to be about the cradles, where the babies are lying in happy drames. It's thim shure that gives gifts ov light hearts an' heels, ready wit an' contintment to thim that don't own the breadth ov their fut ov the land ov their fathers', not even

their graves but's in the hand ov the stranger."

And William looked far away and laid the "Four Masters" down on the little window sill at his elbow, softly and tenderly as if it were the "ashes of his fathers."

"You're forgetting about the fairies, William," I said, to call him back to the subject. "You were speaking about why they went to the South."

"Fairies cannot thrive unless they can get from the fire on one hearthstone ov the ould race to another, wid-out crossin' Sassenach homesteads. They kin do that in Kerry, where I come from, an' there they flourish to this day."

"Do you mane to say there's no fairies in the North? You silver-eyed thafe ov' the world, to steal the very people in green from us!" said Mary indignantly.

"I didn't mane to say any such thing, Mary avourneen," said William, apologetically, "only they're more plintiful wid us."

"Don't be cross, Mary, like a darling," said I. "What are the banshees, William?"

"To my mind, Miss Janetta, they're ould ancient fairies that took sarvice, as a body may say, wid the ould high families, an' whin they're down they wouldn't forsake them, but mourn an' wail for them whenever they drap into the grave or are under misfortune."

"True for you, William," said Mary. "Sure it's give out, for it's come down from father to son as raal born truth, that whin Phelim ier oe O'Neil was undher the murdherin' hans that tuk his life, after the rising in—when was it, William?"

"It was in sixteen hundred an' fortywan, Mary."

"Well it was the wail ov' the banshee tould of his death first. They knew that all was over before iver the news came; an' long as Dunluce is a ruin the banshee has niver left it. She keeps Lady Evaleen's room yet, an' at night wrings

her hans an' moans an' cries over the vanished McQuillans."

"Did you ever see a banshee, Mary?"

"No, Miss Janetta, I niver did see thim; hearin' thim's enough for me."

"Did you ever hear them?"

"Yes, I did whin I lived with Squire O'Ruarke, at the time the ould mistress died. She was an O'Neil like myself, an' the night she died the banshee cried three times. Miss Elizabeth O'Ruarke heard it as well as me, an' it's my belief, an' will be to the end of my days, that she saw something."

"What was the cry like, Mary?"

"It was loud an' solemn, like one crying bitterly, an' the third time it moved away, an' as it went off it sounded like sweet, sad singing, going off up into the air. This place of your uncle's belonged to the O'Ruarkes once, an' they lived in the gazabey that's in ruins up on the hill there."

"That round thing up there? I thought it was a windmill. What is a gazabey, Mary?"

"You are a pattern for asking questions, Miss Janetta. Ask your uncle or look in the dixnery. It is a gentleman's house, shure enough. The O'Ruarke quit livin' in it whin I was a girl. It was goin' to ruin thin, an' since, an' the O'Ruarke are goin' wid it."

"Will ever the banshees go quite away from here?" I asked.

"Whin the ould ruins are all pulled down, whin the ould names an' the ould race disappear off the land, they'll go too, for why would they stay? The O'Neils an' O'Ruarke an' O'Haras are all that the banshee concerns herself wid in all the country side here, an' there's no ruins they frequent, to my knowledge, but Dunluce an' Shane's Castle," said Mary.

"Do they not stay round the gazabey, or whatever you call it?"

"I don't know, I'm sure; nobody ever goes near it to see; it's just an ould ruin."

"But you said they staid near old ruins, Mary."

"Well, they do; everybody knows that. I suppose they are there."

"Ov coorse they are, Miss Janetta," said William, "as long as Miss Elizabeth an' Mr. Dan's to the fore, an' they're likely to last a good while, though they're creepin' up to ould age."

I determined as William spoke to go some day to the old ruin, and perhaps I would hear or see the banshee.

"What is a banshee like?" I asked, that I might know one if I happened to see it.

"Like a wizened ould woman bent down with sorrow, moanin' an' groanin' with helpless grief."

"Were they always friendly to the people that saw them, or the people that they followed?"

I asked this question to find out indirectly if it was dangerous to meet a banshee.

"Yes, yes," said Mary. "They never harmed any one, unless one of the ould race that they followed went into deadly sin."

"What is deadly sin? Is not all sin deadly?"

"Ov coorse, Miss Janetta," said William, coming to the rescue, for fear Mary's theology was not equal to answering my question, "but some sins is deadlier than others—such as cuttin' down the big blackthorn trees that wor ancient landmarks, or wrongin' the poor till they cried, or doin' any hurt to wideys an' orphans that had no one to take their part."

"They are good then? Are they spirits, Mary?"

"They're betwixt and between spirits and crachures, like the gloamin' that comes between daylight an' dark," said William.

"What is a fairy like, William?"

"Och, the fairies are lovely crachures—faces like flowers, hair like spun sunbames, dressed in grane satin or velvet all sparklin' wid diamonds, loike the dew

on the shamrocks, wid ropes an' ropes ov pearls roun' their white throats an' soft arums; sometimes they're in white, loike a lily leaf or a white cloud. Whatever dress they wear they're always lighthearted and gay, dancin' loike a lafe in the sunny air, singin' swater than the burds, an' playin' music on little goold harps, tunes they remimber since the earth was young. An' they help kindly all distrest, dacent crachures."

"Did you ever see a fairy your own self, William?"

"Is it see a fairy, Miss Janetta? Do you think I could live on the blessed Kerry hills, or about the lakes ov loveliness, an' the swate lone glens, widout seein' iver a fairy?"

"Tell us about seeing one, William, do tell us," I coaxed.

"The first wane'er I saw was whin I was a slip of a gossoon. It was the year of the scarcity, whin the pratees rotted in the ground, an' the people dhropped loike dead laves an' died wid the hunger. All the people in the country wor starvin', an' we wor starvin' wid the rest. It's well for you, Miss Janetta, that you don't know what that manes. There was my father and mother, Nora an' Ellen, Jimsey, a wee dawshy crachure on the brust, an' meself. We had boiled nettles an' sourocks to ate; we hadn't a bite or sup ov anythin' wholesome for days an' days, an' we wor wake wid the fastin' an' sick wid the thrash that we ate, an' the hopelessness. My father wint away somewheres where there was road-makin' to be done, an' the laborers wor paid wid male.

"Whin he wint away, white an' wan he was himself, to work for a bite an' a sup for us, he says to my mother: 'Bear up, Mary achushla' says he, 'for by the blessin' ov God, I'll not come home widout a lock ov male itself, anyway; an' ye'll have a bowl ov warm gruel for you an' the childher to put away the gnawin' ov the hunger.'

"Well, my mother was wakely wid the

starvin', and Jimsey the crachure drawin' the heart's blood out ov her, in place ov the milk that wasn't there, an' Nora an' Ellen moanin' wid hunger; an' so she said we would creep into the rags ov bed clothes, an' try to kape warm, an' maybe slape till he'd come back again an' bring the male.

"Well, sure enough we did doze off into a kind ov hungry slape. Myself dramed that I was aitin' my fill ov floury potatoes, an' had lashins ov milk to thim, an' salt an' all, an' I cuddn't taste thim at all at all, for my teeth kep' comin' together as if nothin' was betwixt thim. We lived in a lonesome place among the hills where there was no comin' an' goin'. My mother she dramed, ov all things, that the fairies wor cookin' her dinner. She dramed that she woke up an' saw two beautiful fairies lookin' in ov the cabin door, an' sayin' wan to the other, 'They're dyin' ov the hunger' says one, 'We won't let thim die,' says another. 'Let us make them somethin' good,' says the both. Well I woke up hearin' my mother sayin' in a whisper, 'Lord keep us an' save us!' I was behind her in the bed, an' I lifted my head an' looked over her, an' there forinst me on the flure wor two illigant fairies, wid their gowns pinned up an' they as busy as bees. Before I went to bed I built a fire an' hung on the pot wid wather in it—full to the top—that all might be ready whin my father kim home wid the lock ov male an we wuddn't have long to wait on the gruel he promised us, an' I filled the wather can be fear it might boil away.

"Well, they had the roarin' fire, and the pot was boilin' like mad, an' there was a divine smell ov raal broth wid mate in it all over the cabin. The pot boiled an' boiled, an' they stirred an' stirred, an' tasted an' tasted, an' they niver let on to see us watchin' thim wid hungry eyes. One says to the other, 'It's done, so it is,' an' the other said, 'It's raal good.' An' then they went

over to the dresser, an' they got a bowl an' a wooden ladle, an' they lifted out some ov the broth, an' thin they broke white bread into the bowl an' stirred an' tasted again before our hungry eyes. The weeny Nora could stand it no longer, an' she cried out:

"Give us some, av ye plaze; we're very hungry."

"An' they turned, both ov thim at wance, an' looked at us, an' the wan said to the other 'They're awake.'

"One ov thim came to the bed wid the bowl in her hand, an' my mother tuk heart wid the fear, an' she says: 'Don't be angry at the girleen, she meant no harrum, but the hunger's on her, an' the good smell's too much for her.'

"The fairy put the bowl into my mother's hand an' she said to her, 'Ate that an' feed the girleen wid it. We give it to you because we borreyed your fire an' your dishes.' An' they filled a bowl for me, an' for Ellen, an' filled my mother's again, full up, because she had Nora an' Jimsey to feed.

"An' then they put the lid on the pot agin, an' let down their gowns—tuk the pins out ov the skirts you know—an' put on their cloaks an' hats an' wor ready to go.

"Do you know who we are?" said they to my mother.

"Oh, you're the good people, shure enough," says she.

"How did you like the broth?" says wan.

"It was gran', my lady," says my mother, 'an' the blessin' ov the parishin's on ye, an' it'll do ye good, so it will, whoever you are.'

"Where's your husband?" says the other fairy.

"He's away workin' at the road to fetch us home a lock ov male," says my mother.

"Well," says she, 'set the pot aff the crook an' don't take the lid aff till he comes home, an' give him what's in it then, to stringthin him. Don't disobey

me, for fear the luck I brought will lave ye.'

"'Thank ye kindly,' says my mother. 'I'll do as ye say, niver fear.'

"'If ye think we belong to the good people,' says the other lady, 'why don't you ask us for somethin'?'"

"'I do be afraid to ax yer ladyship for anything, for fear ov makin' too bould an' givin' offence,' says my mother, all ov a trimble.

"'Ask,' says she, 'Try our power.'

"'Well,' says my mother, 'if you give me lave, I'll ask for help to feed the childher, that I mayn't see them die before me eyes ov starvation.'

"'Do you know the clump of whins on the top ov the hill behind the cabin?' says she.

"'Sure there's many a clump of whins up there,' says my mother, 'an' how will I know the right one?'

"'The clump I mane,' says the fairy, 'is beside a big grey stone.'

"'I know it well,' says I, spaking out; 'there's a stone-chicker's nest in it, my lady.'

"'That's the very one, my boy,' says she. 'Ivery mornin' whin the sun rises, if you or your mother goes up to the whins by the big stone you will find somethin' there, if you never tell any one.'

"'I'll never brathe it to man or mortal,' says my mother, 'you may depend upon that, my lady.'

"'So they wint off wid themselves, in their grane gowns an' rid cloaks, an' we niver saw thim more; but ivery mornin' at sunrise I wint to the whins by the grey stone, an' there was always somethin' there for us for many a day.'

"'Were they not splendid? Was your father glad when he came home and found the broth waiting for him, William?'

"'He was that, Miss Janetta, an' the sup ov warrum broth was the beginnin' ov good luck to him. He got work wid the master here, God bless him. After

a while I tuk sarvice wid the master too, an' I have been wid him iver since. I don't forget the time, though, whin I wint to the whin bush ivery mornin' for somethin' for us to ate."

The story was hardly done when uncle and aunt came home, and I was so full of it that I could not keep from telling it to them.

Uncle was much interested, and so was aunt. They exchanged glances and laughed between themselves. Uncle asked me if I would like to be a fairy, and said, pinching my cheek, that I would be an active and benevolent one.

I thought they were laughing at me, and I did not like it; true I was ridiculously full of belief in fairies and banshees, and had a desire to be personally acquainted with them, but I did not want to be laughed at, for all that.

CHAPTER II.

William's story made me desire to see a fairy more than ever. They flitted and danced through all my thoughts.

I was reading Byron's narrative of the loss of the "Wager," and Bligh's voyage in an open boat. Feeling heartsore for the starving men, I wondered that no fairies came to help them in their great need.

I asked William O'Hara about it, and he said he did not think there were sea fairies, or fairies in foreign parts at all, at all, though it was a pity, so it was. The very next evening on which I occupied the creepie beside William, I asked him did he ever see any more fairies.

"I heerd tell ov them from knowledgeable people often an' often," said William, "but I niver seen them myself agin, but wanst.

"It was after the scarcity. My father was workin' stiddy for the

master here, an' I got the word one day to go down to the house in the evenin'. Whin I went, the ould mistress, who was livin' thin, guv me a big apple pie, baked in an earthen dish—big enough for supper to us all, because it was Halloweve, she said. And so it was Halloweve, an' a beautiful bright night, for the moon was at the full, an' the sky was blue, not a cloud in it to hide the purty bright stars that wor lookin' down on us kindly. I was comin' whistlin' along the bridle road thinkin' ov nothin' at all, wid the big dish in my arrums, whin I hurd the sound ov many horses trottin' along forninst me. It seemed as if it was a whole troop ov horse dragoons. I was terribly afeerd to meet them. 'Mebby,' says I to myself, 'it's martial law agin as it used to be, an' the country's unsettled mebbly, as they say it is, an' they might run a sword through me as if I was a puddock.' Thin I remimbered it was Halloweve, an' that the good people might be about. I was not afeerd of thim, but it might be unconvanient for thim to meet a mortal on their track. By this time I heard the gingling ov the bridle reins an' the clank ov accoutrements. I was at the fut of a hill an' I knew I would meet thim, whatever they wor, before iver I got to the top. I looked roun,' an' I saw there was a dry ditch to wan side of the bridle road that I was on, an' as quick as a flash I slipped down into it an' hid, wid the pie beside me. There was a thorn hedge to one side ov the ditch, an' the stragglin' branches shiltered me. The troop of horse came jingling on till they wor forninst me, an' my heart stud still wid the fear, an' me trimblin' like a lafe, whin all at wance they changed into a large flock of sheep, an' jumped over the ditch through a gap in the hedge an' tore across the meadow like mad."

"Did you see them changing into sheep, William?" I asked, breathless with interest.

"Is it me, Miss Janetta, an' me at the bottom of the ditch, crouched down, an' half dead wid the fright I was in? Oirra! I niver opened my lookin' eyes to have e'er a peep at thim till they jumped open wid the dread that the riders were on me, whin I saw thim tearin' through the gap, an' scourin' away across the country. I knew by the look of thim, an' the size of thim, an' the way they wint, that they wor no mortal sheep, but the good people goin' to their place of meetin', an' they just tuk that shape for convanience like. An' my mother said the same when I tould her all about it whin I got home wid the pie. I had no bad luck afther meetin' thim, mebbly because I got out of the way. An' the pie was a thumpin' good wan, an' we hed a plisint night of it, I remimber well."

"When is the best time to see fairies, William?" I asked.

"By moonlight," said William, promptly.

"It was daylight when you saw them first," I objected.

"That's thru for ye, Miss Janetta, but I didn't go to see thim thin; they came to see us. An' whin they are so agreeable an' condescendin' as to come to see wan, sure they're welcome any-time, night, noon, or mornin'."

"Moonlight is the best time to see them, then, William?"

"Yes, it is. An' ov all moons the harvest moon is the best, whin she walks among the stars an' her at the full, the broad flure ov heaven clear an' blue, an' her lookin' down in her glory on the harvest fields, glad I do belave that the earth has plinty on her brust for man an' baste. Thin it is that the good fairy people come out to dance in the light of the moon."

"Is that so, William?"

"That's so, Miss Janetta, an' ov all nights in the year, sure Halloweve is the night they're most sure to be out. I think they settle up their business like on that night."

"Do you know where they meet on Hallowe about here?" I said, speaking carelessly, as if I asked out of mere curiosity.

"Meet! oh, many a place, in the woods or the park on my lord's place, or at the big thorn tree on O'Ruarkes long meadow behind the gazabbe where the strame crosses."

I determined in my heart to try to see the fairies for myself—not that I doubted William's word, but I wanted to see fairies with my own eyes that I might tell about it to my brothers and sisters at home as every bit true; so that Jamie, best loved of all, but greatest tease, would have to believe me whether he would or not.

Autumn was come, and we were enjoying the glory of the harvest moon, and the nights were unusually clear and cloudless, for cloudy skies are the rule in Ireland. To make sure, I thought it best to wait to Hallowe, which was not far off. I did hope that night would be cloudless, and that the moon would kindly give all the light she could to help me in my search. I wondered if it were best to go alone, or ask Bella Wylie to go with me. There was danger that if I told her my secret she would tell aunt, and I would be prevented from going. This was likely, for Bella was but a "leaky vase," and seemed unable to keep anything she heard to herself. And, again, the fairies might not appear if I was too fearful to go alone. On the other hand, the big thorn was a good piece off, and two would be company, and not so easily frightened as one. As Hallowe drew nigh I was glad to know that aunt had invited a few friends to partake of an old fashioned Hallowe supper; this, I thought, would make it easier for me to slip away unobserved. I thought of my project while aunt prepared for her guests, with Mary to help, and Bella and I to hinder. Hallowe came at last, and with it aunt's guests. I was

so petted and taken notice of by them that I thought I never would get away. After supper I stole from the room and went down to the kitchen, which was empty. If ever I went on my expedition, now was the time to go. Uncle and aunt were engaged with their guests. Mary and William busy, and the coast was clear, as William would say. It was not a bright night; the sky was cloudy, and the wind was blowing a brisk gale. The moon was hurrying through the clouds, now shining out brightly, flooding the whole landscape with silver, now plunging among dark clouds as if she were playing at hide and seek. I was afraid the fairies would not be abroad, because it was not a bright moonlight night. I slipped a mantle of aunt's off the hat tree in the hall, and stole out of the back door, and was crossing the stack yard on my way to the lane, when I overtook Bella Wylie with Mary O'Neil's shawl over her head.

"Where are you going, Bella?" I said.

"I'm gaun up the lane a bittie; ye'll no tell ony o' them, if ye please, mem. It wad be an ill thing for me if ye tellt the mistress."

"What are you going up the lane for, Bella?"

"Ye see oor Rab, that's my brither, reads tae us bits o' Burns, an' I thoct I wad try ane o' the freits for fun, ye ken."

"What are you going to do?"

"I'm gaun to dip my sark in the burn beyont the gazabbe. Burns says the sleeve an' Wullium says the hale sark. I'll dip it a' in, sleeve an' a', to mak sure."

"Are you sure you're going to the right place?"

"I canna be far wrang. Wullium says, south runnin' water; an' Burns says, whaur three lairds' lands meet. It's south runnin' water, nae dout, an' three lairds' lands' meet no that far aff, sae I'm gaun to try."

"Must you go alone?"

"Aye, I maun that."

"I'll tell you what, Bella. I'll go with you as far as the big thorn, and I'll wait for you there, till you go to the burn; will you have much farther to go?"

"Na, O'Ruarke's land an' the master's meet at the lang meadow, an' Adair's is no that far aff, only a bittie."

Off we set together; I was well pleased with the arrangement, for while she went on to the stream, I could watch at the big thorn for the fairies. As we went up the lane, Bella showed me a coarse linen chemise, rolled up in her apron, which was the undergarment that was to get "droukit." The lane had been a carriage-drive when the ruin was a habitation; it was now a farm lane, common to two or three places, and went back a good piece beyond the ruin. I looked up at the sky, and wished the moon would come out from behind the clouds and smile on our undertaking. She did not; on the contrary, the flying squadron of cloudland were closing up their ranks, not leaving the smallest crack or rift of blue through which their prisoner, the lady moon, could peep at us. We walked on in silence, discouraged more than we wished to own to each other, because of the increasing darkness. We had neared the ruin—it loomed up, black in its covering of ivy, between us and the dark sky—when the noise of many feet at a sharp trot, struck upon our ears.

"It maun be the fairies," said Bella, and turned and fled down the hill in the most cowardly manner. She let go her apron in her flight, and the "sark" rolled out and remained behind for the fairies or whoever liked to pick it up.

I was very much afraid, but I did not think of running,—fear prevented me; I thought there was less risk in standing my ground than in running with the unknown terror pursuing me. There was

no dry ditch to take shelter in, but there was a young hedge—too young for purposes of concealment, yet I could reach no other refuge; so gathering my aunt's mantle close around me, I sat down beside the hedge, crouching up into as small a compass as possible. I was none too soon in deciding, for the feet, trit, trot, trit, trot, were very near now. I could not, though I listened with all my ears, detect the jingle of spur or bridle-rein, or the clank of cavalry sabre—no sound but the steady trot. I was sorry I could not hear any noise like what William had heard; I could not even imagine I heard it. I looked towards the ruin, frightened, but eager, and here they are, turned into sheep already, coming on at a slow trot, and in the dim light looking very much like common earthly sheep. Even the ram, with his horns curling round his ears, looked very much like Adair's imported prize ram. They passed slowly; then all at once took a panic—at the sark, may-be—and scurried down the lane as fast as they could go, leaving me undecided whether I had seen the fairies or Adair's sheep. I got up after they were gone, and leaving the sark to its fate, went on over the hill. The wind was rising, dashing itself against the old ruin, tearing at the ivy, drawing off as if to take breath, then rushing madly at it again as if determined to have it down, and, disappointed, howled and whistled through the gaps where windows had been. I was getting horribly afraid, and felt more than willing to turn back; but I never had heard of any one turning back after they had once set out in quest of adventures; besides, it was but a little farther to go anyway. After passing the ruin a little way, I entered the long meadow, and leaving the lane, struck across it in a slanting direction, the sooner to reach the rendezvous of the fairies, the great thorn tree.

I forgot about a deep drain that ran across the meadow, and tumbled into it.

I scrambled out again without any damage except wetting my feet, and pursued my way, reaching the big thorn tree at last. Not a single fairy to be seen anywhere in all the dim landscape!

The moon was struggling to break through the barricade of clouds that shut her off from the earth, but did not succeed; now and then a luminous patch revealed a hint of where she walked in her brightness. Dark as it was, there was light enough to show the total absence of the fairy folk. The wind was blowing as if it had blown them off the face of the earth, and intended to blow me after them. There was nothing to be done but to turn and go home disappointed and sad of heart. I walked along carefully to avoid the drain I had stumbled into already. All at once I heard heavy footsteps behind me and the rattle of a chain. You may well believe I was frightened.

It was dreadful to look round to see what it was, and perhaps see something too awful to look at; but it had to be done, lest it might catch me before I knew. I nerved myself and looked round and saw a large bull with a ring in his nose and a chain to it. He was quite near to me, walking along with his head down. I think he tramped upon the chain sometimes and hurt himself, and shaking his head with pain made the chain clank.

I expect I thought of this afterwards when I was out of danger. I had heard of Mr. Adair's bull that came from England, and cost ever so much, and that he was a vicious, unmanageable brute. He must have broken out of his pasture to be in O'Ruarke's meadow. If I thought all this, I did not stop to think, but ran for dear life. I heard the bull running heavily behind me; but I never looked round or stopped to take breath till I reached the old ruin again. I stopped there because I was not able to run any farther, and saw with alarm lights coming towards me up the lane. I lost the last shred of my courage now.

I dare not go forward to face the new danger, and the bull was behind me, as I heard plainly; so I saw no way of escape but in taking shelter at the old ruin.

I turned to enter the doorway, a mere hole in the ivied wall, but the black darkness of the inside stopped me. There was a low pillar close by—part of a ruined porch, perhaps, muffled up to the very top with ivy—ivy was matted and festooned everywhere; I could hide beside it. I took a step inward, put out my hand and touched the pillar as I crouched down beside it, when a most unearthly screech sounded close to my ear. I started up. On the pillar close to me was what seemed to my excited imagination a pale, frilled face with a pair of immense shining eyes. I screamed and ran, but blinded with excessive terror, did not know where I was running to. I took a few steps and dashed into my uncle's arms. I was safe. William O'Hara and the gentlemen guests were with uncle.

"What has frightened you?" said uncle.

"The banshee—it is there," I whispered, afraid to let my voice be heard.

"The banshee!" said uncle aloud, and William lifted his lantern to throw light on the ruins.

As he spoke a large white owl that had been sitting on the pillar, disturbed by the light and the noise, spread her wings and flew slowly and decorously away.

"A good story spoiled," said one of the gentlemen, laughing.

"Yes," said my uncle, also laughing, "the banshee that frightened you, Janetta, has flown away; the banshee that frightened us, we have taken captive, and will carry home a prisoner."

As we came down the lane, uncle carrying me, much against my will, one of the gentlemen noticed something white underfoot and lifted it with his walking stick. It proved to be Bella's

under garment, which had escaped getting "droukit," but was all soiled with the mud of the lane. They gathered round to examine it by the light of the lanterns, and roared with laughter.

"This explains Bella's hysterics," said my uncle; "the young ladies have been off on a divining expedition, as it is Halloweve, to find out who their husbands are to be, or if they will get any."

"I did not, Uncle," I whispered, very much ashamed.

We came home, the gentlemen talking and laughing over the superstition of the peasantry all the way.

On leaving me, Bella had run home in double quick time, but lingered awhile in the yard to take breath, and smooth down her hair, that was standing on end with fright. She was smoothing it down with her fingers, and, looking at the roof of the barn, which was opposite to the big window of the kitchen, she saw it was covered with light, and there were small dark figures moving about in a kind of dance over it. She rushed into the kitchen, tripped on something in her fright, measured her whole length on the stone floor, and raised a howl that brought every one in the house round her. While they were trying to get some explanation of what had frightened her, uncle missed me, and enquired where I was.

"Awa, up at the gazabbey," gasped Bella.

"At the gazebo! What took either of you there?" said uncle.

So all the lamps and lanterns come-at-able were lit, and uncle, William O'Hara, and the gentlemen guests came away to seek for me, leaving aunt and the ladies of the party to listen to Bella's tale of horror. Their lanterns were the moving lights which terrified me. When aunt found out what had caused Bella's fright, she took her out to the yard again, and

convinced her that the light on the barn roof was thrown by the big window, and the little figures were the shadows of the geraniums which moved about as the fire light, and the fitful blaze of the bog fire, rose and fell.

"Wullium said," whimpered she, "that it was the ghaists o' wee unchristened bairns that were shiverin' wi' cauld oot there, an' dancin' to keep theirsels warm."

"I'll talk to William about this nonsense," said aunt

Which she did afterwards, with very little effect, for he said,

"I tould her it moight be thim an' it moight be they've to be somewhars, an' why not there as well as any other place?"

Alas! for the wonders I expected to see, and the dreadful things Bella and I did see! Not only did my banshee turn out a feathered owl, and her unchristened ghosts the shadows of the geraniums, but, as we left the gate open behind us when we set out on our expedition, there was no doubt left on our minds that it was sheep and not fairies we met in the lane, for they were found in the garden next morning, the curly-headed ram at their head, and aunt's cabbages were all eaten with every other green thing.

"Now, Janetta," said aunt, "though banshees and fairies are very nice in stories, see what has become from your trying to bring them into actual life."

I still clung to the idea that if I had, owing to untoward circumstances, missed seeing the good people in green, still there were fairies, for William had seen and spoken with them. He said to me, "Nivir mind thim, Miss Janetta, dear, sure we know there's fairies, an' they'll appear to you yet, so they will."

This small item of comfort I had to enable me to endure the teasing and joking about our Halloweve exploits, until uncle deprived me of it.



SASSEVILLE
THE FAIRIES.

18 65 77

"I am sorry to destroy illusions, Janetta, they're nice and comforting as William finds, but his fairies were related to you, and were neither more nor less than two harum-scarum young girls," said he.

"Oh, Uncle!"—I could say no more.

"A long time ago," he went on mercilessly, "when your dear grandmother was alive we lived in Kerry. I was not married then. I had two young sisters, twins, named Sydney and Harriet, a great deal younger than I. They were very much indulged, for they were, except myself, all that were left to your grandmother out of a large family. They were pretty, golden-haired girls, very small of their age; they were thirteen at this time, and as like one another as twin cherries. They were kindhearted girls, but as tricky as kittens. As William told you, it was a year of scarcity—a dreadful year of privation and suffering to the poor, and of hard self-denial to us who strove to help them. A rumor had come to the girls, through the servants I suppose, that a family up the mountains were dying of hunger. They stole away up the mountain to see if the story was true. They happened to be dressed that day in green French delaine dresses and short red mantles, their gipsy hats trimmed with ivy wreaths. I dare say that Sydney and Harriet made two very nice respectable fairies.

"Uncle!" I almost screamed, a new light breaking in on my mind, "you don't mean to say that mamma and Aunt Sydney were the fairies."

"Wait, Miss Impatience, till I have told my story and then judge for yourself."

"Well go on, Uncle, please," I said.

"They found the cabin easy enough, and went in, for it was on the latch, and saw a pitiful sight. The poor creatures, wasted to skin and bone with sickness and want, were huddled

up in a corner asleep under some rags. There was a fire burning on the hearth and a pot with water in it hanging on the crook over it. Filled with pity, they stole out softly and ran home. Your grandmother and I happened to be out. They could not wait, so leaving the necessity of the case to excuse them, they made a raid on the pantry and abstracted whatever came first to hand. There did not happen to be much in the pantry, but they seized on a dish of soup made the day before, jellied that they might have thrown it over the house, the remains of a leg of roast mutton, and a loaf of bread. They made haste back with their plunder, and pinning up their dresses turned cooks for the first time. When the pot was already on the fire, it was not difficult to make soup out of what they had brought with them. Do you wonder, Janetta, that when ignorant and superstitious people, weak with sickness and hunger, went to sleep famishing, with not a scrap of anything eatable in the house, and woke up to find food provided for them unexpectedly, and to them, miraculously, and were waited on by two pretty girls, whom they had never seen before, and never saw again, that they thought them fairies, and what they received from them fairy gifts?"

"And did they never see them again, Uncle?"

"No, before William's father or himself began to work for us my sisters had gone away to school."

"Oh, Uncle, are there no fairies at all?"

"I think your mamma and Aunt Sydney made very good fairies that time."

"Did grandma know about it?"

"She did, when they came home again, and melted our hearts to pity with the story of what they had seen."

"We laughed when we heard they were mistaken for fairies. I think I see your dear grandma laughing, with the tears of pity on her cheeks."

"Our fairies had to deny themselves many things to be able to leave the secret supply in the whin bush by the big stone every evening."

"Oh, they would be willing to do that I know. Why, Uncle, only think, mamma and Aunt Sydney could say like the pretty text I learned, 'The blessing of him who was ready to perish came upon me!' They would not mind giving up when they had that."

"They never faltered or grew tired of being good fairies while the hard times lasted. When they went away to school I had to promise to be good fairy in their stead."

"Ah, you were a fairy too, Uncle!"

"Not till after the girls went away."

"I wonder, Uncle, that the O'Haras never saw them putting the things in the bush?"

"Oh, they were afraid to go near it, except in the morning, when they were told to go."

"How long were you good fairy?"

"Not long, in that way, Janetta. I wanted to help them, and I did this effectually by giving the father work as soon as I had an opening for him. I took a fancy to William too, and hired him, and he has been with us ever since."

"Was it far, Uncle, to go up the mountain to the whin bush every night?"

"It was farther away than the gazebo or the big thorn either, but your mother and aunt could take as much trouble to be fairies as somebody took to see them."

"And do you really think, Uncle, that there are no fairies?"

"I never saw any but the two spoiled girls I have told you about now, and your search after them was rather unsuccessful too."

"I am ashamed of myself, Uncle, and yet I am ever so sorry that there are no real fairies."

"My dear Janetta, we do not mean to abolish Wonderland, but we will keep the fairies there and not try to bring them into every-day life, to the destruction of the cabbage garden. Good-nature, contentment, loving-kindness, cheerfulness, are four domestic fairies that should be at home round every hearth."

"Oh, Uncle, please don't begin to make a moral yet; let me fancy that there are real fairies a little longer. Why did you never tell William who the fairies were, Uncle?"

"William would no more thank me to destroy his illusions than my little niece does when I dispel her's."

"Dear Uncle, forgive me if I was pert, but really it is hard to part with the fairies."

"Dear Janetta, no one will seek to deprive you of them in books, only do not any more go searching for them. Wait, as William says, till they are so agreeable and condescending as to come and see you."

"Well but, Uncle, I do not want to believe what is not true."

"There is a truth underlying fairy stories which you will discover in time; at present you have found out what is untrue."

So ended my foolish adventure in search of the fairies. I never went in search of them again, and when I returned home I did not, as I intended to do, tell of it to my brothers and sisters. I have kept it a secret, even from my favorite brother Jamie, until now. After I returned to Edinburgh I seemed to have left the land of romance for the land of reality.

NORAH.

THE GIRLS' VOYAGE.

(BY ONE OF THEM.)

(Continued.)

MANILA,
Dec. 28th, 1870. }

We have crossed the China Sea to the Philippine Islands, and are enjoying a life of luxury in the tropics such as I have dreamed of on many a summer day, never thinking to experience. At the house of a hospitable merchant in one of the suburban villages that lie around Manila the "Lyra's" passengers are handsomely entertained, and our kind host and hostess meet all expressions of our gratitude with repeated assurances that our visit is a favor to them. A halcyon state of things, as we were strangers of whom they had only heard through friends in Hong Kong during our long stay there!

I am writing out of turn, as last month's communication came from my hand, but Marion has so large a pile of mail matter weighing on her mind that I told her she must forego the pleasure of a letter to her Gussie, and attend to those which I could not undertake for her.

Will you believe that we had more difficulty and danger of real trouble in coming over here from Hong Kong than in rounding Cape Horn? It was even so, as I will explain, and to begin an account of our ten days' voyage I must say that sea-sickness laid hold upon us before China was fairly out of sight; not severely in my case, for Marion found me in my berth, singing from a book that lay open before me. I asked her to join me, telling her I was keeping the malady at bay, but she was not in a tuneful frame, and preferred to have "a good, square fit of sickness,"

for which purpose she shut herself into the opposite stateroom.

We regained our equilibrium in a day or two, and resumed our methodical sea-life to some extent in sewing and reading aloud to each other. Homer's Iliad (Lord Derby's translation) was the work with which we beguiled a rather disagreeable passage across the China Sea, and for days the weather was rainy or cloudy, until there came a calm, fair Sunday when on the horizon Luzon's blue mountains appeared. If we supposed that there was nothing before us but a speedy sail into Manila Bay, it was a mistake, indeed, for baffling winds and perplexing currents met the "Lyra," and drove her in a zigzag course among dangerous rocks and islands, and at last, on the evening of Nov. 29th, the captain resolved to anchor where the wooded "Corrigidor," curving toward another island, formed a sheltered bay, and to wait there for morning. He was tired out, poor fellow, after a week of anxious navigation, and when the anchor was dropped he did not refuse dressing-gown and slippers, and an arm-chair in the cabin where I was reading "Dombey" aloud, while the rain pattered on the skylight. Suddenly our comfort was put to flight by Mr. Duncan bursting in upon us with bad news. "She's dragging, sir!" he cried, and Arthur, getting quickly into rubber coat and boots, found it too true. The anchor had not taken a firm hold of the sandy bottom, and there was danger, if the wind had risen, of the vessel's stranding on "Corrigidor." To heave the anchor and sail on in the

foggy darkness would have been as much of a risk as to remain where we were, and daylight relieved our fears, showing that the anchor had been dragged only a short distance. Away we sailed under clearer skies, and congratulated ourselves upon the prospect of a speedy arrival in Manila. The track we had been making, as shown by Arthur's chart, was a labyrinth of zigzag lines, often re-crossing the same spot three or four times, and at the end of four days of constant "tacking" it reached the point where it began.

The sun had gone down free from all clouds, save a few gold and purple specks that lingered in his track, and a half moon began to whiten the sails as Marion and I walked up and down on the house, arm in arm, talking cheerily of the past six months' events and planning a distribution of presents among the friends at home. Arthur stood below on the deck, intently watching the forward sails. "We are all right now, are we not?" Marion called to him. "If this breeze holds until we pass the next island, 'Caballo,'" and almost as he spoke the light wind died away, and a strong current bore us toward an island that rose up from the sea in a steep bluff, and when near enough to hear the waves roll up on the beach and crickets singing among the trees, our hearts suddenly stood still, for we knew that our ship was in peril.

"Let go the anchor!" rang out the captain's voice, sharp and strained, as we had never heard it, and in one moment more there was a bumping, grating sound under us, and the great helpless ship had gone on the sands.

A commotion ensued; orders were shouted, and men rushed to and fro obeying them. We poor girls, bewildered, hardly knowing the extent of the trouble, but believing that shipwreck stared us in the face, went below to be out of the way and calm ourselves as best we could by considering the situation. Our ideas of the threatened

shipwreck were vague, but we knew that a sudden gale of wind might easily drive the "Lyra" upon the beach, and our voyage thus be sadly ended.

"What will become of us if we have to go ashore?" Marion asked me. "There is a lighthouse there, and we should take refuge in it, I suppose, but it is well known that the Spaniards on these islands are not apt to be friendly to foreigners. However," I added, "we might as well be ready for what may come, and I can't go scrambling through woods and swamps with these thin shoes on;" so I put on thick boots, and advised Marion to do the same. "Don't talk of boots," she said, dolefully. "Only think of losing all the lovely things we bought in China!" "Oh! they will save them probably, even if the ship never gets off again; but our precious 'Lyra!' Think of leaving her to go to pieces here! No, *don't* think of it while there is hope. Let us go up on deck and see what they are doing to save her."

Some of the sailors had the small kedge anchor in one of the boats with a rope attached to it, of which one end was around the capstan, and rowing off about a quarter of a mile, they dropped it into deep water, then the men on board the ship worked hard at the capstan, turning it round and round, and singing meantime to help them pull hard together. All the familiar songs which used to make us merry on happy evenings sounded at this time to our ears like dirges over a lost ship. Eagerly we watched the rope on which so much depended, fearful that it could not bear the strain, and almost imperceptibly the ship moved backward toward the buried anchor, till at last, it was nearly midnight. Mr. Duncan gave a joyful shout, "There she swings!" and once more the "Lyra" was afloat. To raise a few sails and put a safe distance between ourselves and "Caballo" was the next action, and in the morning we looked back at

its faint outline with very thankful hearts for our deliverance.

One more day and night of slow sailing brought us into the wide, open harbor of Manila, where the few vessels at anchor seem very far apart; not neighborly, as in Hong Kong, and flowing into it the Pasig river bears down myriads of drifting plants from the great Lake Bay in the interior of the island. The city is built along the river banks, and there is nothing beautiful in its aspect, yet even to live there, we thought, would be better than to remain in the harbor with nothing at all to see. Several American gentlemen came off at once to call upon us. One of them was Mr. Irvine, who told us that his wife had made preparations to receive us at their house in Santa Ana, and he hoped we would stay with them as long as the "Lyra" remained in port.

Through a gateway in the massive city wall we drove into Manila, where are gloomy Spanish houses, that with their few windows high above the street are suggestive of captive maidens to an imaginative mind, and gray old churches in every stage of dilapidation. "This one," said Mr. Irvine as we drove past a ruin, "was shaken down in the earthquake of 1843, and the one you see at the end of the street suffered from the earthquake of 1852," and so on, until we thought we had come to a very shaking and quaking part of the earth. There were enough whole churches, though, most of them ugly and weather-stained. Tagal (native Indian) women in gay costumes walked the streets, or stood about shop-doors in the public squares. One fashion of dress is closely followed by all. It consists of a skirt striped in the brightest colors, and a piece of cloth of another color fastened over it like a tightly drawn overskirt; a loose jacket, and a handkerchief above that, with the ends crossed in front complete the costume. The men all wear their

shirts hanging airily outside their trousers, and look as if the chief business of life was to keep cool and lounge on street corners, amusing themselves with fighting cocks.

The Calzadas, a wide, shady avenue, leads from the dingy town into rural scenes, where on either hand stretch rice-fields of brilliant green, and thatched huts of the Indians are upon the roadside among tall bamboos, wide-spreading mango trees, and the great, glossy leaves of the plantain. There are the well-built and painted dwellings of the better class of Indians, or of the Mestizos, a race of people partly Tagal and partly European, many of whom are very wealthy, and in the midst of luxuriant gardens are a few large houses occupied by foreign merchants. Into one of these we drove after coming to the suburban village of Santa Ana; into it, literally, for instead of a front door is an archway through which the carriage passes into a stone-paved hall, and we, alighting there, were led up a flight of stone steps to the second floor, always the dwelling place in Manila houses. At the head of them stood a lady to receive us, and never, I am sure, did two seafaring girls find themselves welcomed into a more beautiful home.

From a wide hall that they call the "cayeda" open spacious apartments on either hand, with polished floors and cane furniture, and from any one of them we step into a tiled corridor, where the sliding sashes are thrown back to admit the air and light. There are no glass panes in them, for in this region of earthquakes that article is generally dispensed with, because of its frailty, and its place supplied by oyster shells, ground and polished, and each fitted into its own socket. They are not transparent, and light is subdued by them as much as if they were of thick ground glass, which must be an objection in the

rainy season if the casements have to be closed.

Marion and I felt almost lost in the great room that was given to us, and were bewildered with so much space. In our adjoining dressing-room there were huge bowl-shaped tubs of stone or bronze, filled to the brim with water, and after surveying these with some amazement we wandered out into our own especial corridor, and were charmed to find that it overlooked the Pasig river, flowing down beyond the distant city, and a peculiar rustle made always by a breeze among banana leaves mingled pleasantly with the murmur of its swift current. "It is more like a fairy tale than anything has been yet," said Marion in rapture, leaning out to gaze far up the winding river. "We are like two princesses in the Alhambra, with our lofty walls and marble pavements, and we are going to have a great deal better time than any of those poor souls ever had."

Arthur was unable to share with us the elegancies of shore life; his presence being required on the ship, where Mr. Duncan was not at all well, and a new comer occupied the position formerly held by Mr. Fordyce, who left us in Hong Kong. (Did I tell you in my last letter? He was sorry to leave, but had a chance to be mate in a homeward bound vessel.) Our captain gladly avails himself of an invitation to be with us, whenever he can leave his duties, and makes morning calls in our corridor to read and talk over home letters with us, or he appears at dinner-time and meets the foreign element in the evening.

As we sit around the table, at the lower end of the "cayeda," enjoying fruit and coffee at our leisure, steps are heard upon the stone stairs, and we hurriedly adjourn to the parlor, there to receive our callers; American, Scotch, and English, partners and clerks, elderly and young; so many gentlemen that it brings my mind into a state of confusion to try

to remember their names and attach them to the proper owners. Our host is most diligent at all times and seasons to impress upon us the fact that our visit here is causing a commotion among this part of society (I mean the bachelors), because the coming to this island of young ladies from the United States is an event of more rare occurrence here than an earthquake, and perhaps only less so than the appearance of a comet. Whether this may be credited or not, we are assured that the "Lyra's" arrival, and the kind of passengers she would bring, had been matters of speculation in Manila for months before that vessel left Hong Kong, and any one who came here from the latter port was called upon to contribute his knowledge of the subject for the public good. One report that came before us was that said lady passengers were "both thirty-five years old at least, and blue stockings of the severest description!" What could we have done or looked like to deserve that? On some evenings, when there are five or six callers at once, we do not have a chance for conversation with all, and so it was in the case of "the man who had great expectations," as Marion will call him. He sat at a little distance from us, conversing with Mr. Irvine, and would frequently survey us with an air of such—what shall I say? disapproval or disappointment—that we came separately to this conclusion: he had expected two extraordinary beings, and, as his ideas were rapidly descending before the reality, was mentally exclaiming, "What a fall is here, my countrymen!" He has never made a second call. Those who pleased us the best on first acquaintance come here often, and we spend the evenings very informally when they are our visitors, often gathering around the piano for singing, or near the chess table, if Marion or myself have been challenged to a contest with the ivory men.

The days begin with a meeting of the family in the "cayeda" for "desayuno," or early breakfast, a light meal of toast, cold meat, guava jelly, etc., and then comes a drive into town while the morning breezes are refreshing. Not always into the city, really, unless there is shopping to be done; oftener the carriage is drawn up on a grassy common near the sea, where we look at the ships and inhale the salt air, and after a pause go back to Santa Ana, glad to seek shelter in the cool house from heat that by ten o'clock is often intense on these December days.

From eleven to one, a sewing and reading circle with our hostess, then "breakfast," which corresponds with "tiffin" in China, and a long afternoon spent in our corridor with books or writing, until the monotone of the river among the rustling plantains assists an overpowering drowsiness, and a siesta must be indulged in.

As shadows lengthen we awake and prepare for the pleasantest hour of the day—sunset, when everyone goes out to drive, and in a barouche we roll toward the town again. If it is band night on the Lunetta, a lamplit-park close to the water, the wide common is astir with countless barouches, and social intercourse goes on in Spanish and English. Dark-eyed ladies lean back on the carriage cushions, and wave their fans languidly as young cavaliers advance to pay their respects, and some of our friends who are careering about on horse-back ride up to bid us good evening, or those on foot invite us to alight and promenade the Lunetta with them, that we may hear more distinctly the plaintive music of the Indian band.

Our bands at home generally play stirring music for an open air concert when crowds are moving about, but here it is soft and sad, the right kind to listen to if you are sitting in a quiet part of the park, looking out to sea,

though not easy to appreciate while mingling in the chattering throng and stopping to shake hands with somebody every few minutes.

On other evenings we go out upon a mole that extends a long way into the bay, and forms a smooth stone walk, where a few people are always sauntering up and down in the twilight. At such times the dreamy enchantment of the Lotos Eaters is upon me; home seems very far off, unreal, and I feel that I would be almost willing to stay forever where tropic stars look down, and let the "Lyra" return without me. But even if Marion would stay too, could Amy give up her brother Arthur, and all the attractions of her native land, for any charm in the Island of Luzon? I think not, Gussie. We drive quickly out to Santa Ana, for romancing on the mole has led us to forget invited dinner company, and among the dark foliage by the roadside the firefly trees flash out, sparkling all over like Christmas evergreens lit up with little candles. I don't know the real name of this peculiar tree that is so attractive to fire-flies, but it forms the prettiest feature of a drive out of town when there is no moonlight.

Last evening we drove to San Gabrielle and San Miguel, two "pueblos," or villages, on the outskirts of the city, and found our homeward way closed up by a torchlight procession in honor of the saints. It was composed of women chiefly, and large images were borne along on elevated platforms all ablaze with candles.

In a recent drive after dark through a more distant "pueblo," we were startled by a sudden glare of light that was from no fire-fly tree. Around an Indian hut twenty people were kneeling in silence, each with a lighted candle, for the Last Sacrament was being administered to some dying person within the hut, and these friends were keeping a solemn watch with the departing soul.

At the sunset ringing of the church bells, all good Catholics here pause in whatever they may be doing to repeat a prayer. The men stand with uncovered heads, and some kneel on the wayside grass, while all talking and laughter is hushed for a few minutes. One instance of the peculiar way in which those of the Romish Church can glide from gay pursuits to religious performances and back again, was observable at the Christmas Eve balls. The 25th of December occurred on Sunday, and before the stroke of twelve on Saturday night, all the dancers betook themselves to church for devotional services; then returned to the ball-rooms and danced until the day was several hours old. Christmas Eve and the Sunday passed quietly with us. There is no Protestant church in this island, and Spanish rule has but lately allowed the existence of a regular burying ground for "heretics." Every Sunday evening there is a little meeting in Mrs. Irvine's parlor, and one in another house nearer town, attended by some who feel it a privilege for even two or three to gather together in Christ's name. There are very few who show interest in them,—only six young men come here for the service; but it is always the pleasantest evening in the week, we think, and after prayers and the reading of a sermon, we all spend an hour by the piano, singing the dear old hymns.

I must not forget to give you an account of a funny adventure that befell us last week. One afternoon, Arthur and Mr. Duncan came out in a barouche for us to drive with them, and we took a romantic road that wound among rice fields to the Indian village of San Pedro, and through a narrow pass where the rocks were heavily draped with vines, and feathery bamboos growing on them; far above us, bent over in an arch, making a soft green gloom from which we emerged upon the Pasig river, and there the road ended. Then

it was proposed that we should leave the carriage to return through San Pedro, while we went down the river in a banca, or Indian canoe. There were several floating near the bank, and although Marion and I were unsuitably dressed for such an adventure, we could not refuse anything so jolly. Gathering up our white muslins, we crept into the long, narrow canoe with some difficulty, because of its very low roof, and were soon speeding down the river, apparently in high glee at our situation. It might have been more comfortable, for the roof interfered with our view, and Mr. Duncan was obliged to sit in the stern where he could raise his lofty head, and let part of his inconvenient length hang over the side of the banca. With broad paddles our boatmen made swift progress, and when we reached a place where the river branched, our mirth was turned to anxiety, for we asked one of the men which way would bring us to Manila, and he pointed that by which we had come. This puzzled us, for it was difficult to see how we could have been so mistaken, and at first we did not believe him, but we had lost all idea of locality, and at last allowed him to turn back and go in the direction that he declared was that of the city. By this time night had come upon us suddenly, as it does in the tropics, and we began to fear we should be carried beyond our landing place. A few lights twinkled from huts among the bamboos on the banks, and every other minute a flash of lightning illumined the dark river.

"We must have been on the way to Lake Bay when we first set out," said Arthur, "and I never had my head so completely turned before. Look out, shipmates, for Santa Ana church, because it is high time to see it, and I shall believe these Indians are taking us to the lake, after all, if we don't discover some familiar landmark soon." "There it is now," said Mr. Duncan, his keen eyes first discovering the great

building looming up in the dusk, and feeling much relieved, though rather guilty, we soon encountered Mr. and Mrs. Irvine, who had been very much concerned for our safety, as the driver of our barouche had returned a long time before, leaving some indefinite message about the Senors, the Senoritas, and the river.

"Not dinner-time yet!" I exclaimed in surprise, seeing the table in the "cayeda" had no adornments of damask and silver. "I thought we were very late." "And so you are," cried our hostess with a dismayed face. "My dear girls, have you forgotten our engagement to dine at the Senora Bareda's to-night?" Indeed we had, and with one glance at Mrs. Irvine's elegant costume and at our dragged muslins, we rushed to our room, and arrayed ourselves for a dinner party in a flurry from which we did not recover until half way in town, when Marion found that she had left her gloves behind during our excited preparations.

We were guests of a Spanish lady that evening, and after saying "buenos noches" to her at first, I was at a loss for any more pure Castilian with which to address her until our departure, when I distinguished myself by bringing out "He tenido una noche muy agradable." (I have had a very pleasant evening.) After all the studying during the voyage to San Francisco should you not have thought I might have had the language at my tongue's end? But six months in China caused my learning to melt away like morning mist; I was either too hot or too much entertained by other things to attend to my "Ollendorf."

There were people enough at the Senora's to talk English with, and the one whom we were invited especially to meet was a pleasant little bride, who came out recently to the Philippines on her father's vessel, and was persuaded by a Scotch merchant to remain here. We always have a good time at these

dinner-parties, notwithstanding the disturbing consciousness that if a single lady converses more affably with her right hand neighbor than with the gentleman at the other side it will be commented upon in various offices next morning, and the fact will be food for much speculation. Those who believe that gossip is altogether within the province of womankind should see how easily the stronger sex indulge in it when their minds are not too much encumbered with weightier things.

The best part of the evening to me is the homeward drive near midnight, when such moonlight as we never saw elsewhere illumines our way, for a half moon seems to give as bright a light here as the full orb does in the temperate zone. Banana leaves, half screening the thatched Indian houses, reflect its gleam from their polished surfaces; the warm air is filled with the sweet, heavy perfume of the *Dama des Noches* (Our Lady of the Night), and the three ladies in Mr. Irvine's barouche find little need for any head-covering, or even for thin shawls over their white dresses on these December nights.

The way that we were taken home after one dinner-party deserves to be described. We went to a house that stands so close to the river that a flower could be tossed into it from its back windows, and found after leaving the table at half-past nine o'clock that our host had a little steam-launch in waiting to convey all the company who lived near the Pasig to their homes. This, at least, was his original intention, but it expanded into nothing less than a journey to Lake Bay, twenty miles above the city; and crowded together in the bow of the boat for the purpose of seeing at best advantage the moonlit scenery before us, we steamed on toward the lake, of which we had heard strange tales enough to make it seem like a fabulous place to Marion and myself.

After many windings of the Pasig

our launch came to the entrance of a broad sheet of water, fifteen miles across, and about a hundred in circumference. In the distance were mountains, dimly seen, for the moonlight had become hazy, and after a brief pause we began our return trip at the witching hour of night. The chilly dampness of the air brought shawls into requisition, and jokes did not fly about with such startling velocity as during our upward way, for some of the gentlemen were cold and sleepy, but a good deal of fun was kept up among a few of us until half-past two, when we arrived at Mr. Irvine's house. There the shallow water would not allow a near approach to the shore, and on went the boat to the domain of a neighbor, where they barely succeeded in making a safe landing for ladies by means of a narrow plank, down which we tottered into outstretched arms and found ourselves on dry ground, almost too stiff and tired for a walk of five minutes to our abode.

"After so many gay evenings, one of you girls might have the charity to come off to the ship for to-night and console two dismal fellows," was our captain's plea when he came ashore to see us the next afternoon, and as I had visited the "Lyra" for that benevolent purpose quite recently, Marion said she would accompany him. Our kind host evidently thought she was making a sacrifice to exchange an evening on shore, with the social pleasures of his beautiful and brilliantly lighted "sala," for the melancholy harbor and a ship's cabin, and he followed her to the carriage with persuasive words. "I am *sure* you would stay if you knew who are intending to call to-night, Miss Marion," was the last arrow in his quiver, but her firmness elicited from him the quotation:

"When a woman will, she will,
And you may depend on't;
But when she won't, she won't,
And there's an end on't,"

which he delivered in a despairing tone

as the barouche rolled out through the gateway.

On the quiet upper deck of the "Lyra," watching the sunset fade from sky and water, and trying to cheer both captain and mate, who in truth were dismal, as the former had said, being heartily tired of Manila Bay, Marion called their attention to a steamer that was approaching them. As she anchored quite near they recognized the English man-of-war "Hanover," from Hong Kong, among whose staff of officers is Lieut. Olney, the gentleman who discussed the Assembly's Catechism with Marion at the musical party in November, and did not appear to have had too much of it on that occasion, as Arthur surmised from the friendliness with which he pursued our acquaintance afterward. Darkness soon hid the steamer from the sight of the trio on the clipper ship, but through it came a boat to the gangway of the latter, and by light of the deck lantern was revealed the jovial visage of the lieutenant. He was a walking news-bag on this occasion, and regaled them all with the substance of what had been said, done and contemplated by the hundred (more or less) of our acquaintances in that mountain-walled city since we left it. Then we had to be told what entertainments Manila was able to afford, and declared it would be "a jolly lark" for Captain Roslyn to give a party on the "Lyra" and treat our city friends to a ship supper; the novelty of which, at least, would be sure to please them. Acting on the suggestion we did have an impromptu party the next night, and the fun of it was no less than if it had been longer in contemplation; but there was not quite such a merry-making as upon a similar occasion in California, for the etiquette of Manila would hardly allow of ladies mounting the spanker-boom.

Not believing in the proverb that advises one to do in Rome as the Romans do, we did not attend a bull-fight given

here last Sunday, and I do not suppose we missed any great enjoyment, or that you will regret that I cannot give you a description of such an entertainment.

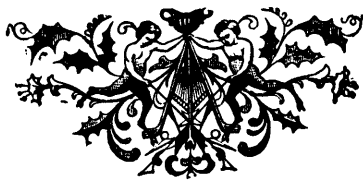
I could spin out this letter indefinitely were I to describe our visits to shops where the exquisite pina embroidery is sold, or to the old Spanish churches, where are seen the usual glittering altars and amazing pictures of the saints; or to the houses of Mestizos, to watch torchlight processions from their balconies, or merely to return civilities by a short call; and at such times our conversation with the ladies of the mansion has to be carried on by means of an interpreter, who knows both Spanish and English. It

is not fluent, but generally very funny. I might do better to follow the example of a young American gentleman who made calls with his pocket-dictionary, and would refer to it whenever he was obliged to pause for a word. Above all, I could lengthen this epistle (if it were not too long already) with sketches of many friends who are so agreeable that even Marion's confidence in mankind seems to be reviving. You can hear about them all when we come home, for it will take more stamps than I can well afford to secure the safe transportation of these pages, and I will not add to their number, therefore

Farewell, from

AMY.

(To be continued).



EVOLUTION.

The history of Evolution has been the subject of so much comment and discussion of late, that a statement of its chief outlines in the pages of this journal may be in order.

The theory in its full expression fills many large volumes, and, therefore, a popular summary like this must, of necessity be very imperfect, and can merely allude to arguments that, in their complete statement, would demand chapters by themselves.

The chief authority on the subject is Herbert Spencer, who has organized the results obtained by the labors of Laplace, Lyell, Darwin and the rest, into a philosophical system. His definition of Evolution, in simple terms, is the unfolding of the universe in all its present variety and diversity from the simplest conceivable state, by processes of change, such as we can now see in progress around us. This definition shall be explained more fully and clearly in the course of this paper. Mr. Spencer, in giving the *a priori* arguments for his theory, shows that the efforts of science have been constantly exerted in proving how minor and special laws of Nature are derived from higher and more general ones. Yet were enquirers able—as they are not—to arrive at some simplest form of matter and motion, from which all Nature could be traced to have sprung, that matter and that motion could not have their origin explained from the absence of anything simpler to explain them by. Wherefore, the conclusion follows that human knowledge can only rightly concern itself with the history of things, not with their ultimate origin.

Let us now trace the manner in which the view of the history of

Nature, as one of development, has arisen. When savages have just curiosity enough to try to account for the kindly or terrible forces of Nature around them—the sun, the rain, the storm and the earthquake—they ascribe their action to spirits. Even the lower animals and trees have thus been supposed to have had souls. Similarly the Hindoos, Egyptians and Greeks had mythologies, where gods represented not only creating and sustaining powers, but even the pursuits and passions, the virtues and vices of men. As men have risen in the scale of intelligence they have observed that many of the appearances and forces they have dreaded or desired, have seemed to be subject to rule. The succession of the seasons must have been one of the first and most important series of such recurrences observed by primitive man. The Chaldeans by their long records of eclipses of the moon, became aware that they were exactly repeated in periods of 223 months; thus they were enabled to predict them and divest them of their terrors. Lucretius, the Roman poet, chid his readers with their uncleanness, and bade them not blame the gods for sicknesses and plagues while their houses and persons remained unwashed and filthy. And, to-day, the recitals of trustworthy travellers acquaint us with the existence still, in Africa and elsewhere, of tribes of fetish-worshippers, who believe that individual spirits control pestilences, harvests and the chances of war. Such crude superstition, now shrinking away from light in the most inaccessible parts of the earth, was once widespread, as ancient history tells us. The notion of a spiritual essence in every wind, tree or

stream, passed into a belief in gods of wider and wider power, whose laws, the products of their arbitrary and changeful wills, their domains in earth, air and sky obeyed. As knowledge increased, the arbitrariness of these laws gradually passed away from the minds of men. Patient observation and reasoning revealed an agreement between all the parts of Nature, which could be so far proven that the conviction gained ground as generations of thinkers and workers succeeded each other, that the universe must have had a single First Cause, whose works harmonize perfectly in one system. Winds and storms, once referred immediately to spiritual direction, were observed to be due to the sun's heating action on the great ocean of air that envelops the world. Earthquakes, at first attributed to the movements and belchings of subterranean giants, were noticed to be allied with volcanoes; and their action was then believed to arise from fires in the bowels of the earth. So sudden and awful a power as lightning, however, resisted explanation until Franklin's day; and comets, although in some measure now reduced like earthquakes to study and prediction, continue to alarm the uneducated in civilized countries, who regard them as omens of ill. The ability to reduce intricate forces to laws of order is remarkably exemplified in recent meteorology. The American Weather Bureau now daily issues its "probabilities" for the coming twenty-four hours, and they prove correct four times in five. Here is a remarkable case of what Comte said was the object of science:—"To see so as to foresee."

Let us now illustrate the process of explanation, and we shall observe how special laws may be derivable from general ones. We shall take the case of the rise of mercury in an exhausted barometer tube; this on analysis we find to be due to three general laws,

that air has weight, that pressure on a fluid is propagated equally in all directions, and that pressure in one direction, not opposed by equal pressure in a contrary direction, produces motion, which does not cease until equilibrium is restored. Now principles like these have been studied, and very many of them explained in turn by others of still wider generality, so that the question which students now ask is, to quote Mill: "What are the fewest and simplest assumptions which, being granted, the whole existing order of Nature would result?" Many phases of matter and forms of force, once thought to be quite distinct and unrelated by any tie, have been connected together by intermediate stages of gradual change. In this way the great laws of Nature are being constantly reduced in number and specialty. Prof. Andrews has shown in a remarkable series of experiments that the change from the solid to the liquid consistence in bodies, and from the liquid to the gaseous, are perfectly continuous processes. The differences between ice, water and steam are linked together by insensible transitions, which, while never abrupt, follow each other too rapidly for ordinary observation. In some substances, as wax for instance, the gradual change from brittle hardness to plasticity and thence to viscosity and liquefaction can be plainly noted as heat is applied. Such experiments have led to the opinion that all matter can exist either as a solid, a liquid or a gas. Faraday liquefied by cold and great pressure several of what had been called permanent gases; and the extension of our means of producing pressure and cold will doubtless enable us to liquefy every gas. Although the greatest heat we can bring to bear on carbon does not fuse it, still analogy would lead us to believe that coal in burning, for a brief instant, too short for observation, exists in the liquid state.

The earlier works on physics abound with distinctions, which minute and careful observations have since removed. Iron was once thought to be the only magnetic substance; now every form of matter has been proved susceptible to this polar force. In like manner, with respect to heat and electricity, conductors and non-conductors were regarded as radically different things; now they are all included in one unbroken list; for while no material transmits either force without some resistance, this resistance is in no case indefinitely great. Transparency is not now held to be the exclusive property of some few substances,—air, glass and the like; it is extended to matter universally. Experiment and reason lead us to suppose that any substance, if reduced to a sufficiently thin film, would be pervious to light. Gold, one of the heaviest metals, has been beaten into leaves so fine as to faintly transmit solar beams; while many translucent chemicals, as the salts of silver and copper, are compounded of elements unknown as yet in any but an opaque condition. Upon such grounds stands the modern opinion that all matter is capable of receiving, holding and giving out any kind of force whatever.

Sound, heat and light have been satisfactorily explained by comparing their methods of propagation with that of water waves. And besides the forces just enumerated, electricity, gravity and the rest are now referred to the motions of the ultimate particles or atoms which make up all masses, for any force can be converted by suitable means into any other, and all into common mechanical motion. In this view, every change in Nature obeys the laws of a single science,—mechanics, even in those cases where they elude our powers of direct investigation by their minuteness and intricacy. The comprehension of all the variety of forces under the single head of motion,

discovers the wisdom of the ancient saying that all our senses are but touch and its modifications. Sight results from rays of light striking the eye, hearing from waves of sound impinging on the drum of the ear; smell from the contact of floating particles with the olfactories; and taste from soluble or liquid matter touching the gustatory nerves.

The first books written on chemistry regarded acids and alkalies as substances of directly opposite properties; at present all are united in a single series, with the most different farthest apart. Chemists have analyzed by all the forces at their command, every known substance, and have reduced the number of elements contained in the almost boundless variety examined to sixty-three. Whence it follows that the innumerable properties of the host of chemical compounds are contained in and due to the properties of but sixty-three substances. Many eminent chemists deem this small number reducible were the powers of analysis increased. In a laboratory we can notice some cases where the structural forces of Nature begin imperceptibly at the unstructural. We can take a solution in which no microscope can detect any definite formation whatever; yet from it the symmetrical architecture of crystals may be seen slowly arising; and if we take a perfect specimen and break off a corner from it, on replacing it in the solution the damage will be accurately repaired.

Between the inorganic and organic kingdoms of Nature, the partition walls have been removed at several points. Formic acid, such as ants secrete, has been artificially made by the synthesis of its elements; and so have some other products formerly regarded as purely organic. Professor Huxley, who is a very thorough-going evolutionist, holds the opinion that highly complex chemical compounds finally reach the condition of what he calls protoplasm,

the simplest basis of organic life. This speculation, suggested by the wide areas of truth through which the principle of continuity or unbroken relationship is traceable, is hardly yet accredited with a position higher than that due to an ingenious but indemonstrable hypothesis.

As investigation goes on it becomes more and more plain that all the dividing lines drawn for convenience' sake by the various sciences, do not correspond to realities in Nature; and the tendency of increasing knowledge is constantly to efface them. The lowest forms of vegetable and animal life may be followed down until they seem to meet in the so-called "protistae,"—organisms which can neither be classed as animal nor vegetable. Plants like the fly-catcher, which closes on venturesome insects and absorbs their juices, show us how powers commonly supposed to be animal only, may belong to some members of the vegetable kingdom. The Sensitive Plant has something very like a simple nervous system, for it not only folds up and droops when rudely touched, but also when exposed to fumes of chloroform.

The same line of suggestion may be carried forward by observing in plants what seems parallel to instinct in animals. If a layer of soil near the surface of the ground be unusually rich and moist, the rootlets are spread almost wholly along that layer, while in any other case they descend. The tendrils of vines find points of support two inches from their lines of growth, and a pumpkin leaf moves toward a convenient water-pan and immerses itself therein. In cellars and caverns the feeble sprouts grow toward the light, which they seem to feel is their life. Instinct in animals, particularly in insects, invades at times the higher domain of intelligence. The forms of nests, of wax-cells and so on are not rigidly invariable, but are always adapted more or less to circumstances.

Glass rods have been set in a bee-hive, and the little workers to avoid them have sprung all sorts of arches and buttresses, such probably as neither they nor their ancestors ever did before.

The discussion among naturalists as to what constitutes a species, shows how hard if not impossible it is to draw impassable lines in nature. Some systems divide existing forms of life into thrice as many species as others. The production of infertile hybrids, such as the mule, is the chief test we are told of true species; yet two species of pheasants yield fertile young, while two varieties of pimpernel, a common meadow plant, stubbornly refuse to blend. The lesson taught by these examples is confirmed by the study of ordinary growth. Newton had once to be told that two and two are four, yet from that day to the culmination of his powers, he grew without any suddenness from the ignorance of common infancy to the wisdom of a great philosophical genius.

Considerations like these have led to the theory of evolution, to the opinion that the whole body of natural laws exist in lines of family descent, and that these lines, unlike those of human families, never suffer by death; so that the whole of them, simple and involved, are active at once. Gravitation and the subtlest nerve-forces are present and obeyed in one and the same human frame. All the rules and principles of the present universe are believed to have arisen by the interaction and mutual influence of a very few fundamental laws. Now the evidences of science tell us that in the ages of the past, Nature and her laws were less multiform than now, and the less so as those ages were remote. Hence thinkers of the evolution school are of opinion that all that now is—the suns, their attendant worlds, the vegetation that clothes our planet, the animal life that peoples it—have come from the simplest

state of matter known to us, by virtue of the simple forces inherent in it, acting through time all but infinite.

Such in its widest acceptation is evolution. As a philosophy it regards all the forces in nature and all the phases of life as developed in unbroken series from simpler ones which have preceded them. It looks upon all the laws of the universe as interwoven with each other, because of a community of origin; and it expects these bonds to be revealed in the future in all the cases where our scrutiny is baffled now. With this brief exposition of the views of evolution, let us pass to the evidences in fact that are adduced in its support.

The first in order is the theory of the origin of the solar system, now accepted universally; even among eminent men who do not believe in the general philosophy of evolution. The nebular theory, as it is called, begins by considering all the matter now composing the solar system as originally diffused throughout an enormous space as an attenuated gas, forming a vast irregular mass. This mass tended to concentrate by gravity, and gradually condensed; in doing so, the irregularities of its form gave rise to a rotating motion. As condensation proceeded, the swiftness of rotation increased and with it the centrifugal force at the extreme parts of the mass, which resulted in detaching various portions from time to time. These portions formed the planets and their satellites; the remaining central mass is the sun. The force of gravity acting as it did, through enormous spaces, caused great heat on the collision of the gaseous particles: just as a leaden bullet may be melted by its discharge from a rifle against a solid wall, and just as a meteorite may be fused and vaporized by its fall to the earth. In a similar way, but on a scale of transcendent grandeur, the primitive solar system was rendered fiery hot. The sun is the only member of the

series which retains that condition, owing to its bulk being greatest and its radiating surface being therefore less than that of any of its planets. That the sun and its attendant spheres have had a common origin is inferred from the fact that all its members move in the same direction, that all the planetary orbits vary but little from a uniform plane, and that all the worlds, with the exception of Uranus, and perhaps Neptune also, turn from west to east on their axes.

The exceptions just stated have met with ingenious attempts at explanation, which, however, are not deemed satisfactory. The most striking confirmation of the nebular theory is that given by the spectroscope, which shows that chemical elements such as we find on our globe, enter into the composition of all the other members of the system, and also into that of the distant stars. Farther, this wonderful instrument tells us that the lighter substances are the more abundant on the remoter planets, as might be expected from the greater weight of the heavier ones carrying them toward the centre. Besides all this, as the spectroscope enables us to tell whether a shining body is solid, liquid or gaseous, it has disclosed to our view throughout the starry heavens, enormous nebular masses that seem to be systems such as ours in the making. Sir William Herschel long ago maintained that true nebulae existed in space—but as improvements were made in telescopes from year to year, many masses that had been supposed to be nebular were resolved into clusters of stars, and it seemed as if Herschel's opinion was wrong, until the invention of the spectroscope settled the question by showing that some of the masses that appeared nebulous were really so. And here it may be proper to give some recent discoveries made with this remarkable instrument, on which speculations relevant to our subject have been based

It is found that the elements contained in nebulae and in the brightest (and therefore hottest) stars are few in comparison with the elements contained in our sun and stars of a similar yellow color. From this it is conjectured that what we call chemical elements arise from simple substances, which cooling from an extremely high temperature makes combination possible.

The nebular theory, it must be conceded, gives a decided direction to the probability of evolution in other fields of investigation. Here it is shown how a shapeless, gaseous mass, acted upon by simple gravity, contained within it all the possibilities now realized in our system—as series of worlds with their restraining bonds to a prime luminary, with their satellites to modify night, with such inclinations of their axes as give rise to the succession of the seasons, and with those slight causes of mutual perturbation which require vast cycles to run their course, and which subject all planetary life to searching strains at intervals of thousands of years. Surely no more striking example of a variety of forces lying latent in a simple one, could be given than this.

The science next in order of generality to astronomy, is geology. The old books on this subject, written when the opinion prevailed that the world was only about six thousand years old, referred all the important changes on the earth's surface to catastrophes vastly greater than any recorded in human history. As observation went on by students whose fields of view were necessarily limited, single causes of change were thought to be equal to accounting for all that had happened. Thus one school espoused the doctrine of the universal agency of water, and another that of fire; now both of these overworked causes have been absorbed into a long list of geological forces, to which additions are constantly being made. The evidences of internal heat in the earth coincide perfectly with

the nebular theory of our planet's origin; and the successive contractions of the crust in cooling are held to explain in large measure the gradual upheaval of mountain-chains and the subsidence of ocean-beds, which, imposing as they seem to us in extent, are really small in comparison with the size of the earth. Lyell, the greatest geologist who has yet appeared, fully adopted the theory of evolution, although it required a thorough re-statement of much of his writings, where formerly he had opposed it. He deemed the evidence geologically to be in favor of the view that, in millions of years, such forces as we now see at work have produced the earth as we now find it. In his "Principles" he points to the enormous forces of volcanoes and earthquakes, which never cease, and whose effects are felt over vast areas. Hecla in 1783 vomited forth matter equal in volume to Mont Blanc, submerging hundreds of towns and hamlets, destroying thousands of lives and millions of treasure. The beating of the sea on its shores, reduces them and distributes the particles on the floor of the ocean as a fine sediment, to appear as a distinct stratum in future ages. The eroding action of rivers likewise encroaches on their banks, and the matter carried along either builds up deltas or is carried to the sea. It has been computed that the mud carried away by the river Ganges during the four months of its annual flood, is 112,000 tons per hour. Glaciers and icebergs conjoin in the farther sculpture of the features of the earth. The relative distribution of land and water, and the great preponderance of water, Lyell also shows to be the main causes of climates, with all the different effects they produce. While Lyell accepted the theory of evolution as one in accordance with the facts as he saw them, he did not dogmatize about it, not thinking it right to do so. In the course of his "Principles" he comments with great plainness on the

spirit actuating some observers of nature, who whenever they find a difficulty resort directly to the theory of supernatural intervention, instead of industriously trying whether natural laws may not yield an explanation.

Geology brings us to the subject of paleontology, or the natural history of organic remains as found imbedded in the earth. In consequence of the action of the tremendous forces which have submerged entire continents and converted them into ocean-beds, and by volcanic and chemical action, the fossil record has been largely placed beyond our reach, or completely obliterated. Footprints have been preserved in strata found in Connecticut of a bird whose skeleton is as yet unknown. Sometimes a tooth or a fragment of a bone is all that has been preserved of some large animal. The imperfection of the record has long made paleontology a weapon now for now against evolution. Such facts as the great age of the most remotely deposited human skulls, together with their high grade, and the existence in far distant times of a higher type of fish—the ganoid—than any now living, are adduced against evolution. While, on the other hand, the comparative recency of man's development to a state when he began to make and transmit records, the general simplicity and fewness of organisms as time is traced backward, are cited. When Darwin first issued his "Origin of Species" he frankly admitted that what was then known of the fossil record did not bear out his views. That was in 1859, since which time the discoveries chiefly made by Professor Marsh in the Rocky Mountains, have brought to light a series of fossils giving what are claimed to be decided illustrations of evolution. A series of bones has been found which Professor Huxley, the first living English biologist, holds proves the descent of the horse from an animal but little larger than a fox. In this deduction

Professor Huxley is opposed by Principal Dawson.* Between two such naturalists who shall decide? Parallel in suggestion with the fossils just referred to, are the skeletons found of forms intermediate between those of birds and reptiles. Professor Marsh also shows, in the Peabody Museum at New Haven, the finely preserved head of a bird in which the teeth are distinct. Here we reach the ground where the contest about evolution has been fiercest, namely that of natural history.

About the beginning of the present century, Lamarck, a French naturalist, brought out the theory that species could merge into each other; that changed conditions through long ages powerfully affected an organism, and that with a certain subtle internal force an animal could not only change some of its organs, but produce others. This latter proposition was deservedly ridiculed and served to cast discredit on the reasonable parts of the theory. It had long suggested itself to thoughtful minds that such species as differ in little else than size, as the leopard and cat, goose and duck, rat and mouse, might have had a common origin. Lamarck thought that such cases were examples of divergences which change in circumstances might produce in a more marked degree. His friend St. Hilaire concurred in his views and added to his arguments; he pointed out the rudimentary organs in certain animals, as the suppressed hind-legs in some lizards, and the teeth in foetal whales; these he explained by their being inherited from ancestors who had very different habits from their living progeny, and had transmitted organs which from disuse had in part disappeared. He showed how disuse had affected the eyes of moles and cavefish, that had almost or totally lost their sight; and he argued that if a lack of exercise could cause the eye to wither

*See Literary Notices at the end of this number.

and nearly vanish, so might active use for ages develop that organ from an incomplete state to perfection. Goethe and Oken in Germany about this time gave to the world their remarkable discoveries, by which they held that a skull is a transformed vertebral bone, as all the various divisions exactly correspond. And farther that all the different parts of a flower, sepals, petals, stamens and pistil are but modifications of the leaf. In the same direction also point the facts of typical structure, that is the fixed likenesses with respect to number and disposition of parts, which pervade the great kingdoms of natural history. Thus all insects and crustaceans have twenty segments; the bee and the spider, the butterfly and the lobster, all yield on examination the same number of case-divisions. All the vertebrates possess strong analogies with each other; the short neck of the elephant and the long one of the giraffe are made up of the same number of bones. The wing of a bat, that of a bird, the fin of a porpoise, the jaw of a dog and the hand of a man have precisely an equal number of parts; and the whole series can be placed in such an order as that but little difference appears between one form and the next.

An argument for evolution of much weight, is that offered by the classification of organisms due to Profs. Huxley and Haeckel. They describe a tree of life, the main branches of which are the great classes; the divergent branches are the families and the twigs are the species. This classification is widely accepted by naturalists as true to fact, and since the differences between living things are comparatively unmarked as they touch the great trunk of the tree, and increase with the distance from it, a very significant inference favorable to derivation is presented to us. The study of embryos has also yielded like suggestions—in the earliest stages of foetal growth all

embryos look alike. With time come the changes of form that mark first the class, then the family, and last the species that the organism belongs to at birth. The resemblances between the embryos of allied species are very marked up to within a few days of perfection. A dog in the sixth week of foetal life is scarcely distinguishable from a man in the eighth week; the human embryo having a distinct tail which afterward disappears. Animals destined to be as remote from each other at maturity as the tortoise and common fowl, at the fourth week of incubation are scarcely to be known apart; and the forms then presented differ very little from those of man and dog at the same period.

Haeckel, a German naturalist, has recently published a bold and ingenious work entitled "The History of Creation," in which by classifying embryos, and noting their likenesses and differences at various stages of development, he attempts to draw family lines between species and species, genera and genera. He regards embryology as a necessary complement to paleontology, and believes it can bridge over the chasms now existing in our imperfect fossil records. He considers the development of an individual from conception in the cell to birth, as an epitome and illustration of the history of not only the human species, but all organic life.

Having thus sketched with great brevity the bases of the opinion that plants and animals as known to us, have descended from fewer forms of simpler structure, it is now fitting to state the theory which purports to explain how these changes may have come about. This is Darwin's theory of natural selection. It begins by noting the tendency of all organisms to multiply in geometrical progression; thus a single pair of herrings could pack the oceans solidly in a few years,

if all their eggs were hatched, and all the young survived and bred in turn. The acorns from a single oak, if all planted and grown to maturity, and if their fruit were planted and so on, would in a few generations cover the earth. Now, plainly this reproductive tendency cannot be satisfied; the food of animals, and the circle of growth for an average plant, practically, do not vary from year to year. Hence, as more organisms begin life than can possibly continue it, a struggle for existence ensues. And, here a slight force comes into play with the most important results—that slight difference which exists between organisms of the same kind, offspring of the same parents, or seeds of the same plant. The children of an ordinary family may average the same as their parents, but one may be brighter than that average, and another duller. Such differences may register the comparative vigor and health of the parents in the successive years when the children were born. In the same way in Nature at large, such individuals as have been a little the stronger or more intelligent or plastic, have kept their foothold in the severe struggle for existence, while their neighbors have perished. Now, among the unmistakable lessons of geology is that which tells of wide and striking changes which the surface of the earth has undergone. Continents and seas have replaced each other; islands have arisen and disappeared in the oceans; isthmuses have been removed, or have been uplifted, where formerly straits connected seas together. Besides all these, we find proofs of world-wide variations in climate, among which may be stated the arctic temperature which at least once prevailed over nearly the entire globe. By all these various means Darwin argues that species have been urged by necessity into new conditions; the upheaval which would convert an archipelago in-

to a single island, would expose plants and animals in one area to new enemies from another; the changing of a climate by banishing a particular kind of food would require the adaptation of an animal to another and also call forth its powers of resisting cold or heat. Thus such individuals of a species as have been elastic in the direction marked out by nature have survived, and been enabled to transmit their valuable peculiarities to their offspring. Thus there has been a "survival of the fittest," and we find organisms adapted to their surroundings, because such as do not become so cannot live. The plasticity of organisms is proved in the domestication of wild animals and the culture of wild plants. We have only to compare a wild boar with a hog, a wolf with a dog, or a crab-tree in the woods with a Baldwin or Fameuse apple-tree in an orchard to see this. Upon this plasticity the breeder of fine cattle bases his operations. Let us suppose that he seeks long fine wool for his market. He selects from his flocks of sheep, the pair having the longest and best wool; these he mates; from their young he selects again and so on, until from ordinary stock he derives an improved variety in a few generations. In the same way, the "early" varieties of cereals and kitchen vegetables have been provided for our tables; gardeners have selected seeds from the plants that have ripened first, sown them and selected again, until they have reached the smallest limits in which a plant may grow and mature. Co-operating with the powers of extra strength or craft or plasticity in animals are the effects of beauty and vocal endowment. These latter when possessed by males often decide the mating with the most attractive females, and particularly among birds have been concerned in the improvement of species. The hues of flowers are something more than ornament,—nor are their scents useless and wasted; they

serve to attract the insects that are the chief agency by which pollen-grains are distributed and the flowers fertilized. Evolutionists do not hold that there is an inherent power in a species to vary; they hold that it is the effects of competition and changing conditions that tend, in part at least, to modify and eventually alter species. There are today living mussels precisely such as those whose shells are embedded in strata formed in distant ages. Such organisms are commonly low in the scale of life, and have touched nature at but few points; equable conditions such as a sea-bottom affords, and a moderate rate of reproduction have perhaps shielded them from extinction or change. So far from there being any intrinsic improbability in living things, we know that parasites taken from the outer world of conflict for food, into the bowels of a horse, where nourishment abounds, undergo a degradation of form.

With regard to the descent of man, Darwin holds it probable that we come from an ape-like animal, which has not now any direct representatives alive. He says that when the first decided step was taken toward manhood, it is very likely that that degree of superiority enabled our remote ancestors to exterminate allied inferior tribes and leave themselves in seeming solitude. He draws attention to the parallel process by which differences in variety among animals tend to widen,—the more various the tribes living on, say an island, the more individuals can find subsistence there. Therefore any occasional habit of eating a new food, or of swimming or diving or climbing tends to become confirmed, resulting in marked changes of structure. Darwin points to the vast differences between the most savage and the most civilized men; differences, he thinks, nearly as great as those separating savages from gorillas or chimpanzees. His arguments, which have here been referred to merely, oc-

cupy a large volume, which in but eighteen years has by its truthfulness, its admirable candor in stating the arguments against the theory advocated, and by the complete and minute knowledge of natural history revealed in it, won its way to the acceptance of at least one half the naturalists in the world.

In the foregoing sketch the limits of space have made anything more than an imperfect outline of the principles of evolution impossible. Enough has been said, however, to lead some of the readers of this paper perhaps to farther study of the subject in the volumes where its details are set forth. If the works of natural historians and geologists are deemed too difficult for study, simpler topics quite as much lit up by the theory of evolution may be found in tracing the growth of an invention like the steam-engine; or the gradual improvement of houses and their furniture; or the development of systems of water-supply. All these subjects will be found to yield the progressive changes from simplicity at the beginning to final complexity, in which evolution consists.

Let it not be supposed for a moment that any claim can be made that this theory is demonstrated in all the departments of nature; all that can be justly said is that many different kinds of testimony,—in some cases complete, in others only suggestive, converge toward establishing its probability. We are not warranted in asserting that there is proof that man with his enquiring mind, his moral sense and restless aspirations has come from a nebula by processes of change such as we can now see at work around us. That uniform laws have been concerned in it all, no one questions; but that we are yet very ignorant of those laws is plain to any reflecting mind that ponders on the littleness of the known, and the infinity of the unknown. Darwin, the chief working builder of the theory of evolution, and Spencer, its philosopher, be-

lieve that future investigation may bring to light forces as potent, or more so, in transforming organic structures, than that of natural selection. Our acquaintance with law is itself subject in its growth to law, and our stores of knowledge are as yet but very fragmentary.

In these days when the extent and specialization of the sciences would threaten to make a student either shallow or narrow, the theory of evolution is of great value. It connects by lines of continuity diverse classes of facts, and shows us how differences in degree may at last amount to differences in kind. It suggests in every enquiry into the causes of complex phenomena, the

possibility of reducing them, by following the lines of genetic relationship, to the most primitive laws of nature. It gives us the best plan yet devised of classifying information on any given subject, thus confirming that ancient thought by which knowledge was called a tree. But perhaps its supreme worth is that in alleging that there are evidences of a universal community of origin and a unity of government it sheds a strong light on the idea of a single First Cause—a Creator whose laws the progress of knowledge constantly proves “have no variableness, neither shadow of turning.”

GEORGE ILES.



NANCY CARTER'S THEFT AND ITS CONSEQUENCES.

BY E. H. N.

CHAPTER XII.

"I remember now," the Doctor said, turning to Squire Greely, "that two rascally-looking men stood in the store, eying me all the while I was getting the money changed. They were whispering together, and watching me; but I never thought anything of it at the time."

"We must make a strict search as soon as it is daylight," answered the Squire. "I and my people will be ready very early. Possibly we may recover the money and bring the villains to justice."

"I'll be ready for one," said Neef Hall, who had joined the party at the Doctor's, looking commiseratingly at Alice, as he spoke; "and I only hope we will catch 'em."

All was confusion and bustle, so that Alice and her little charge scarcely exchanged a word. The child, truly alarmed, and understanding that the money was gone, and with it all hope of Harry being set at liberty, stood beside her friend, lovingly clasping one of Alice's hands, listening to the eager conversation which was going on around, without half comprehending it. The soft blue eyes filled again and again with tears, and her head sunk on Alice's shoulder, and she murmured while the buzz of words was in her ears, "No hope, no more hope for poor Harry!"

"All gone, and no hope," whispered Alice in reply, and they were both silent again. At this moment Seth entered, accompanied by two of the other neighbors who lived a little beyond Greely's farm. It appeared

that he was anxious to spread the news as far as possible that night, and had gone on after alarming the Greelys. One of the men who returned with Seth, Joshua Tyler, whose lot joined the Squire's on the north, was a sharp, quick-sighted, wiry little man, from Vermont, and had come to the "Greely Settlement" some ten years previous to the time of which we are writing.

His first question was, "Where's the handkerchief that stopped his mouth? Let's see what it's like."

Every one looked at Seth, who, of course, had taken it out—every one but Alice, who had no care to see the farce carried on.

"Here 'tis," said Seth, pulling a red silk pocket handkerchief from the breast of his jacket. He spoke huskily, and his hands moved nervously. He had not quite expected this—that in getting the neighbors together he was virtually instituting a court of enquiry which it would take all his tact—and a great deal more, if that pale, silent girl would only speak—to outwit.

"Here 'tis," he went on; "as like Uncle's own as two peas."

"Yes, yes!" broke in the Doctor, "the fellow took it from my pocket—I remember it now."

"What was the tying done with?" continued Tyler; "we can, maybe, make evidence out of that."

"The tying," said Seth, hastily, for he was beginning to be seriously alarmed, and was extremely glad the tell-tale veil was out of the way, "with some bungling piece of old rope, I think, though I'm not sure. I cut it, whatever 'twas, and threw the pieces I don't know where."

"No use to look for them, I suppose?" said Tyler. "You are sure there were two of the robbers, Doctor?"

"I am sure there must have been," he answered. "Yes, one could not have done it all. You've no idea how quickly it was got through."

Tyler knitted his brows as if in thought, but said he did not see how they were to get a clue to work on. He and the others soon left, promising to be on the spot as early as possible to commence the search.

Alice returned with Susie to Squire Greely's, and in the quiet of their own apartment the two desolate ones mourned together over their misfortune. A little before daybreak the child fell into an uneasy slumber, but to Alice no such balm came that night. She felt herself now, indeed, *alone*. Even the child must not share her secret, and she must leave the place. But how, and when, she knew not, but soon—very soon.

The following morning the search began in earnest, Seth leading the party. There were a dozen or more, men and boys, who joined the expedition.

When the hunt had fairly begun, Alice bade Susie go with Mrs. Greely to the dairy work, and she sat down to think over her position, and form some plan by which she might leave the "Greely Settlement" at once.

She determined to leave the child as much in ignorance of her movements as any one. Susie was firm and rather reticent, but Alice thought the temptation too great for one of her tender years. There was no way but flight, and she must leave her friends to imagine whatever they liked. She dared not remain near to Seth Wheeler.

During the morning Alice took her resolution, and made what little preparation she considered necessary for a lonely girl going out a stranger, and almost penniless, into the world. She tied up a very small bundle, too small

to attract attention, of such articles of dress as she fancied Mrs. Greely, who was not thoroughly acquainted with her wardrobe, would be least likely to miss from among her stock of clothing. She next looked over a packet of old letters which had belonged to her father, and selected two from among them, which she placed in her pocket. These were from a brother of her father, who had at one time, perhaps fifteen years before, resided in some part of New Hampshire. He might be dead—he might have returned to England; or possibly he might have gone "West." But, however that might be, he was all the relative she had ever heard her father speak of, and towards him her heart turned in her misery. The few dollars which remained to her would help her along the first part of the journey which she desired to make with as much speed as possible, and for the rest she must trust to charity, believing she would be watched over and cared for by Him who taketh thought for the least of His creatures.

No one, not even Susie, knew that Alice had a relative except in England; consequently, there was little probability of her being traced in the direction she had chosen for her flight.

In the afternoon, the two girls walked to the moss-covered rocks on the river bank—Alice to muse and wonder, Susie to ask a thousand questions which it was impossible for her friend to answer. At another time it would have been a hard struggle for Alice to leave the child. But now every other consideration was swallowed up in her dread of Seth Wheeler, and her anxiety to fly his hateful presence.

The Squire's dog Rover—now old and useless—followed the girls to the bank of the little stream, and lay stretched out at Susie's feet while they sat on the soft green moss. He looked wistfully from one to the other as if trying to comprehend what had so

suddenly changed the appearance of both. He was very fond of the child, and almost always accompanied her and Jack in their rambles over the fields. Alice endeavored to say something to the child to prepare her for their separation, but found it impossible without arousing Susie's suspicions. They talked of Harry, of Mrs. Clifford, and of their new sorrow, until the sun was getting low in the west, and they supposed the search was over for the day. Susie had a lingering hope that the money would be found, but after a while gave it up, seeing that Alice could not be induced to share in her feelings.

Alice dreaded to return to the house, dreaded to see them all so interested and excited. When the girls entered the kitchen it was evident that Mrs. Greely was full of news. She began at once.

"Husband and Jack have got home, but husband has gone again. They say Seth Wheeler has found a place in the bush where the wild grass is trampled not far from where the Doctor was tied; and what's more, two or three pieces of copper coin that the Doctor says were in his purse, were scattered about. Husband thinks the robbers stopped there to look over their booty—for of course they had a lantern with dark sides—and dropped these copper pieces. He feels sure they'll succeed in the search at last."

"O Alice! how joyful!" cried Susie, fairly dancing in her glee. "How joyful to think we shall have the money back! We shall! we shall!"

"Perhaps so," Alice answered, "but we must not be too certain. I am afraid we shall never hear of our part."

This quiet answer quite hushed Susie, and astonished Mrs. Greely, who said,

"Why, Alice, I thought you'd cheer up with the news. I don't think you ought to feel so down about it. You'd

ought to have confidence in what husband says."

"So I would, dear Mrs. Greely," she replied with a sigh, "on any other subject; but there is something *here*," laying her hand on her breast, "that tells me I shall never see my money again."

"Dear, dear! how strange!" said Mrs. Greely, "a kind of *superstitious* feeling, is it? Well—well, likely enough that's what breaks you down so about it. Husband says Seth is the most earnest of all the lookers," she continued, giving Alice a sly glance to remind her that she—for one—had not forgotten his liking for herself, "and they're going to keep on hunting to-morrow. Tyler went to the village where the money was changed, and found out that the two men the Doctor thought looked suspicious were honest farmers that the merchant knew quite well. But come, Alice, try to cheer up; I can't bear to see you so miserable."

Alice tried to call up a smile, but the tears drowned it, and she rose up quickly and went to her room. Susie remained with Mrs. Greely awhile, and then went to see Jack milk the cows and hear what he had to say about the search for the robbers and the money.

Alice had chosen a very suitable time for her flight. She knew that every one would sleep soundly after the excitement and want of rest on the previous night, and the hunt of the day, and consequently she would be less likely to be observed than if she delayed for a time. She took her supper with the family, and returned at once to her room. Her preparations were all made, and when the house was quiet and the child—worn out with her feelings—soundly asleep, Alice crept softly down stairs and slipped out at the back door. She was soon on the road, and almost flew till she was beyond the immediate neighborhood. She was a good walker, and had no fears of her strength failing her in this extremity. She had provided her-

self with a few biscuits from Mrs. Greely's ample stock, and a slice of cheese from the dairy-room. She dressed herself in a plain dark chintz, and wore a bonnet which she had that morning so changed and re-trimmed that no one would recognize it. A thin old-fashioned shawl was wrapped around her shoulders to protect her from the chill of the night air and dews, and as she speeds on her way with many a heart-ache, we will follow the hunters who on the following morning engage in a search of a different nature, with feelings awed and solemnized.

CHAPTER XIII.

When Susie awoke next morning she was greatly surprised to see that Alice was not in the room, and still more so when she discovered that she had not been in bed through the night.

She dressed hastily and ran down to the kitchen, where Mrs. Greely was preparing breakfast.

"O Aunt Sophy," she cried, "where is Alice? Do you know where she is?"

"Why, no, child," Mrs. Greely replied. "I haven't seen her. Isn't she upstairs?"

"Oh no, Aunt, she is not; and I think I've been alone all night; for the bed was not touched a bit where Alice always sleeps!"

Mrs. Greely ran upstairs, looked about and hurried back, appearing much agitated. She next went to grandmother's room and told her that Alice was not in the house, and that she feared something dreadful had happened. She then went to where the people were milking and gave the alarm.

All was now anxiety. Everything was left, and a search began around the place for the missing girl. Very soon the neighbors began to assemble,

intending to separate through the surrounding country, and take a wider range to look for the robbers and stolen property than they had done on the previous day. But now their energies were needed in a more important search.

The poor old dog appeared greatly perplexed by this unwonted commotion, and it seemed that he missed Alice from the group of eager talkers. He began sniffing about, but did not become satisfied. All at once, as if some new idea had just entered his brute head, he commenced whining around Susie, licked her hands, and then bounded away towards the bank of the river, to which spot he had accompanied herself and Alice the day before.

This singular action on the part of the dog sent a new and terrible thought through the minds of all present. Susie tried to follow the party which started for the river the moment they understood the dog's motions. But she became faint and trembling, and was obliged to sit down and wait in fearful anxiety the return of the rest. Neef Hall headed the party. He was running, bent half double, with his mouth wide open, and displaying two rows of long, ugly, tobacco-stained teeth. The Squire came next, and was closely followed by Mrs. Greely and Jack Hunter.

Tyler had been sent to alarm the Wheelers, and pretty soon he returned with Seth, who was really agitated, and very earnest to find Alice. He stopped to say a word to poor Susie as he passed, and did his best to re-assure her. She was still faint, and sobbing violently, and Seth promised to send Mrs. Greely back at once.

Neef was first to reach the river-side, where he beheld old Rover standing on the moss-covered rocks nearest the stream, whining piteously, and looking down into the calm, still water below.

"Dear, dear!" he exclaimed to the

Squire, who came up quite out of breath, "she's gone and drowned herself, poor creature! I do believe she has. Even the brute seems to know it."

"Mercy upon us! Can this be possible?" said the Squire, clasping his hands and almost wringing them.

"No doubt on it," answered Neef. "Look at the brute; he's sure enough about it."

Rover was still looking into the water, whining and howling alternately. Had he only whined, possibly Neef might not have been so much alarmed. But a dog's howl meant *death* to him, as to many another who has not learned to look past "signs," up to the great Director of all.

Mrs. Greely and Jack were soon beside Neef and the Squire, and at once embraced their opinion that Alice's dead body lay at the bottom of the creek. Mrs. Greely was disposed to blame herself, and said in a choking voice:

"Poor dear girl! I ought to have watched her and looked after her. I ought to have known yesterday, when she wouldn't take heart, where it would end. Dear me! how very wrong and foolish I've been!"

At this juncture, Seth and Tyler, with one or two others, came up to the side of the stream. As soon as Tyler noticed the dog, he said abruptly:

"She's drowned! She's down below! Brutes don't do the like of that for nothing, Squire. I can tell you they don't."

Seth turned deathly pale, yet he managed to tell Mrs. Greely about the child. She at once ran back to Susie, and with Jack's help carried her to the house and laid her on grandmother's bed. The old lady had waited anxiously for intelligence.

"What is it, Sophy?" she asked, as Mrs. Greely entered. "I expect the worst."

"It is the worst, mother," Mrs.

Greely replied. "They all say there's not a doubt the poor girl has drowned herself."

"Poor thing, poor thing! Her brain was turned with the loss, or she'd never have done it," said grandma, tenderly, while she stroked Susie's hair and smoothed her brow.

"Poor little lone lamb," she added, "you'll be my care now, as long as my old hands can do for you."

Susie Clifford did not leave that bed for several weeks. Her constitution had received a severe shock, and a low fever ensued. She lay almost helpless, and sometimes quite delirious, all those long, sad summer days while the people were engaged in the search for Alice Barford. The money was thought no more of at that time, and all energies were bent to the one object.

It never occurred to the good folks of the "Greely Settlement" and vicinity that old Rover's instincts could be at fault. They even forgot that he had never been keen-scented or very reliable. A sort of awe took possession of their minds, and from the moment they had seen the dog on the rocks, looking down into the water, no one doubted that Alice, in her despair, had drowned herself.

There was a sudden bend in the river about a quarter of a mile below, above which the water set back, and was quite still and deep. It was soon proposed to drag the river for some little distance in the hope of recovering the body before decomposition should take place. It was a frightful undertaking to them all, but particularly to Seth Wheeler. He was now filled with the deepest remorse, and would gladly have undone his last week's work, had that been possible. He could scarcely endure the dragging of the river. He expected every moment to see the dead body of the only woman he had ever loved come up from its depths. His face was almost livid, and his hands trembled violently whenever he looked

to see what was drawn up; but he never shrank from his share of the dreadful work.

While thus engaged, Seth learned to understand his own motives and feelings as he had not done before. He made the discovery that he had not thoroughly learned to hate Alice as he supposed, and that underlying all there had been a faint hope that if all opportunity of saving Clifford were cut off, he should yet win the pretty English girl for himself. The flood-gates of his heart were lifted, and all the old passionate love came rushing back again. The hardest heart must have pitied his wretchedness; but no one knew what he suffered. Seth Wheeler was not a man to criminate himself under any circumstances, and his late attention to his cousin had completely deceived most of his acquaintances.

Poor Susie lay burning with fever through it all. The fruitless search was over; the men had returned with solemn faces to their ordinary employment before she could rise from her bed.

The child was well-nigh broken-hearted when her delirium was past, and she realized her desolate condition. Doctor Wheeler, who attended her as if she had been his own daughter, feared for her life, her reason. The little girl was at length comforted not a little in a somewhat singular manner.

One day during her convalescence Susie had been sleeping lightly, or as grandmother said, dozing, for an hour or so. Suddenly she started up, her features all aglow with happiness, and cried out,

"O grandma! O Aunt Sophy! Alice is not dead! Dear mamma just came to my side and said so. It was all so real, and I'm sure it is true. She said I was not to feel sorry any longer, for we should all be happy by-and-by, and that Alice is not dead!"

"Deary me, child, 'twas a dream, a pleasant dream, that's all," said the old

lady kindly, while Mrs. Greely said: "Mercy on us! how the child talks, and how wild and bright her eyes are!"

Doctor Wheeler said, and every body else said, it was only a dream; but Susie herself was firm in the belief that her mamma had indeed stood beside her and whispered those words, to her great comfort.

After this she recovered more rapidly, for now her mind was at ease about Alice, and also her care for Harry was greatly lightened. No one shared her new notions, but she was convinced that Alice was living.

How anxiously Susie Clifford waited for the day to come when she could creep up to her old room, and look over Alice's clothing and see what was gone. She talked little on the subject after the first, but it was ever near her heart. She was now ten years of age, but appeared much older than most children of eleven or twelve; probably from the companionship of her mother and Alice. During those long bright days of returning strength she had many deep thoughts, some of which would have puzzled a wiser head than hers.

CHAPTER XIV.

The first day that Susie was permitted to go upstairs she went directly to Alice's trunk, opened it, and began to look over its contents. No one had been to it since Alice's disappearance. Probably had she merely been absent on a visit Mrs. Greely's curiosity might have got the better of her; but it belonged to the "poor dead girl," and as yet she had not had the heart to open it.

Susie was surprised to see things so tumbled about, as Alice was usually so very orderly. She saw that Alice's dress had been changed after nightfall,

on that sad day, and she at once missed the little drab bonnet, which Mrs. Greely had probably never seen. A light shawl which had belonged to Alice's mother was also gone, and the child rose up from her search so full of happiness, and yet so mystified—so astonished!

She said to herself, "Now I must not tell what I have discovered, for of course Alice meant it all to be a secret. If I only knew why, and if she went to do something for Harry? But I wonder *why* she did not let me know her plans. Perhaps she had a reason for going so quietly, and thought I would not keep the secret if I were asked. After all, Alice was right; and I am so happy! Oh so happy!"

Susie did not go at once to Mrs. Greely or grandmother; but went to the garden and gathered the first flowers since her illness, that she might have something to speak about besides what was particularly on her mind.

After this Susie grew cheerful and soon regained her former health. She was now more than ever the charge and pet of the Greely establishment. Every one took the same deep interest in the welfare of the child, from grandmother to Jack and Neef.

After a time the gloom which Alice's disappearance had cast over the little community cleared away, and in a few months she was seldom mentioned. Another took her place as teacher of the little school, which Susie attended regularly when able.

Seth Wheeler alone remained a prey to horrible thoughts and deep remorse.

Wherever he went by day, when he retired to his room at night, it was ever the same. At length he became so disordered in his mind that he was constantly fancying Alice was by his side,—a little back—with staring eyes, dripping hair and distorted features.

He grew pale and wasted away. In vain his uncle prescribed; in vain Mrs. Wheeler and Anna pitied and petted.

He bore his distress for two or three months, during which time he had asked his uncle to join him in making good the money of Alice's that had been stolen, and between them the amount was handed over to the Squire for the use of the child she had loved so well.

This was quite a relief to Seth's mind. He had destroyed the embroidered silk pocket-book and the Doctor's purse, and now felt quite at ease concerning the robbery. But that awful face! It was seldom out of his sight. How could he be rid of that? After much reflection his mind was made up. He would marry at once! He would marry Anna! He would bid defiance to the staring eyes and dripping hair!

There was little need of wooing. Anna was already won; Aunt Rhoda was pleased; the Doctor gave his reluctant consent, and the wedding took place early in the November following Alice's flight.

Teddy Walters came to the "Settlement" soon after Susie's recovery. He was quite overwhelmed on hearing of Alice Barford's supposed fate; and he now spoke confidentially to the child, telling her how he had watched Robinson and Gordon whenever he found opportunity.

"It's not easy, now," he said, "to get a sight of Master Gordon; for it's himself that has Master Harry's place—bad luck to him—and stops a good bit up from Mistress Leland's house. It's only when himself and Robinson have business together that I get the chance to listen to their talk. It's myself thinks Gordon's taking money from Mr. Hyde to put into Robinson's business, meaning to go shares in the profits; though I'm not quite sure of it yet. That's nothing about Master Harry; but yet if I could get the miserable spalpeen out of his old place—the saints protect him!—I'd be right glad."

Mrs. Greely told Teddy of Susie's

strange dream, adding that they did not try to put it out of her head, as it appeared to be such a comfort to the lonely little creature. The child saw that no one had any confidence in her *dreaming*, and she did not even mention the subject to Teddy Walters; consequently, he looked upon it from the Greely stand-point.

Before Teddy left he requested leave to bring his sister, whom he expected out early in the spring, to the Squire's, to be taught a little of work, and something of the ways of the country before she should try "going out."

Mrs. Greely consented, and Susie looked forward with much pleasure to the time when Bride Walters—"little Bride," Teddy had called her—should arrive to share her room and be her companion. This was not strange; for the child was indeed lonely. Since her recovery she read a great deal in her Testament and Hymn-book, and had picked up an old tract or two in grandmother's room, which she had pored over until she knew their contents by heart. Besides these she had few books suited to her years, save her school-books, and sometimes the days passed wearily away, though she was not sad or dispirited. Susie begged Teddy to bring her any information he might gain, as he would have brought it to Alice had she been there.

"Deed and I will," he replied, with an admiring glance, "for it's yourself that knows what to do with it, young as you are. You seem almost to have grown a woman in a year."

Susie sighed, and her eyes filled with tears as she thought of all that had occurred in that year. Scarcely a year yet it was since that happy, happy day that Harry spent at home. But she soon overcame her feelings, and bade Teddy good-bye with a pleasant smile.

As we are now going to leave the "Greely Settlement" for a while, perhaps we may as well follow Alice, and fly from it in her company.

It had never crossed Alice's mind that her friends might think she had taken her own life, and she hastened on through the night as fast as possible, counting the hours by the stars which shone brightly; wishing to place as many miles as she could between herself and her persecutor before day-break; and, so great was her terror, she never paused for more than a few moments until about ten o'clock the next morning. Here was a ferry to be crossed, and when this was passed she stopped a few hours to rest and recruit her exhausted energies. There was now a good number of miles between herself and her fears, and she could breathe more freely.

She found the people less inquisitive than she had anticipated at this, her first resting-point. It was a farmhouse, and people who crossed the ferry often stopped for a little. It was no unusual thing for the farmer, whose name was Waite, to take travellers on with his team to the next town, where they could take a public conveyance to either the East or West.

Alice very thankfully availed herself of the opportunity thus afforded her of proceeding at a more rapid rate than her own poor blistered feet could now carry her. The excitement had kept her up, so that she had no idea how fatigued she had become until after her partial rest. Before eight o'clock that evening she was more than fifty miles from the "Greely Settlement," in a considerable town in Northern Vermont. She was travelling in a southeasterly direction, as that would lead her to the part of New Hampshire in which she supposed her uncle, John Barford, resided. When Alice stopped that night in the town of L—her money was getting low; only two dollars remained, and she dared not go on without increasing her funds in some way.

On leaving home she had had no

thought but to beg from charitable persons enough to defray her necessary expenses. But as the distance increased between herself and her tormentor, new ideas forced themselves into her mind, and she resolved to seek some respectable employment in L—and remain till she had earned sufficient to take her to New Hampshire; and also to procure a suitable supply of clothing before seeking her relatives.

She must give up all thought of helping Harry at present. She must forget everything but that she was alone in the world, and had herself to support under many disadvantages; and, doubtless, this train of thought which her necessities forced upon her mind was far healthier for Alice than a continued brooding over her misfortunes. She thought of dropping her name of Barford, and calling herself Alice Marten, which was indeed her name, though not her whole name. But on reflection she concluded this precaution to be unnecessary, it being a much easier matter to lose one's self in those primitive days than it would be in our own time. There were no telegrams to go before, and no detective photographs to follow after in those good old days!

Alice felt quite safe now, and in the course of the ensuing day succeeded in getting plain sewing to do in a small respectable family; at a low price to be sure, but yet it was far better than asking charity. Here she remained about four months till she had earned enough to enable her to proceed on her journey properly clothed. She was well and kindly treated by her employers. They were satisfied with as much of her history as she chose to communicate; which was that she was an English girl, the daughter of a teacher, and that her father being lately dead, she was earning her way to New Hampshire in search of some relatives whom she believed resided there.

It would be far from our purpose to say that Alice was happy here; but she was calm and peaceful. She had many a sad hour as she stitched away at her work, for it grieved her that she could do nothing for Harry—nothing for his sister, who had become as dear to her as if the ties of blood had bound them. She now felt that if she and Harry were ever to meet, the meeting must be brought about without effort of hers. She could never forget him—could never marry another. But now she could patiently wait and endure.

How often she wished, as she lived over the past in memory, that she had put Harry's case entirely into good old Mr. Bennett's hands; but it was too late now.

CHAPTER XV.

While stopping in L— Alice Barford never regretted her flight. She never for a moment lost sight of the terrible necessity which urged her on—which drove her out into the world. It was while here that she learned to forgive Seth Wheeler, and here that the sweet peace came into her heart enabling her to feel that all things were working for good together, in this her great life-trial. In L— she had access to many means of grace which she had previously seldom enjoyed. Her spirit was refreshed and her whole inner life strengthened by the religious services which she attended every Sabbath, and she left the place renewed in mind—a growing Christian.

When Alice again pursued her journey a few days brought her to the place where John Barford had once resided. On enquiry she learned that such a person had been known there formerly, but that he had left some eight years ago. No one knew where he had gone, but it was thought to the "West,"—Ohio or Indiana.

Again Alice was disappointed, and again she rose above her disappointment. Her first impulse was to return to L—and take up sewing as a business. But on reflection she resolved to go to the minister of the place, tell as much of her story as she dared communicate to any one, take his advice and beg his assistance. The beautiful and retired location in part induced Alice to pursue this course. It was a lovely valley below the White Mountains, and lay between a low range of hills to the west and the mountainous country on the east. The vale was about five miles in length, peopled mostly by a farming population, and altogether was a most picturesque spot. It was called the "Carter Valley," owing to its first settlers having borne that name. It proved that Alice's decision was a wise one, for the minister of the place—a Congregationalist—Mr. Bright, was a most excellent man, full of the love that "thinketh no evil," and just the one to receive such confidence and proffer wholesome counsel. What was also very important to Alice's well-being just now, Mrs. Bright was a good and sympathizing woman. She told her story frankly, omitting only her suspicions of Seth Wheeler. When she spoke of the loss of her money, she added that there seemed no particular inducements to remain where her home was the gift of Squire Greely, and that after a little she had determined to seek her father's brother. She did not conceal the fact that she had flown from Canada, fearing it might be some enemy of the Cliffords, or even of her own, who had taken the money, and that further mischief might be intended.

Mr. and Mrs. Bright listened attentively to the strange story. Both gave her their warmest sympathy and promised to respect her confidence; and both were earnest and cordial in their invitation to the desolate girl to remain with them until some employ-

ment could be found by which she could support herself respectably. Mrs. Bright was struck by Alice's beauty and refined manners, and could not fail to notice that she was a young person of far more intelligence and much better education than many who were employed as teachers in New Hampshire. Mr. and Mrs. Bright would gladly have engaged her to teach their own children, five in number, but the minister's low salary would be a serious objection. Their little ones must be taught at the public school to save expense.

Alice remained at Mr. Bright's, making herself useful in the family in all possible ways,—truly grateful for the kindness shown her, and only desirous to prove her thankfulness by rendering every assistance in her power, until Mr. Bright could procure a situation which she could fill.

Nearly three months wore away, and still Alice was an inmate of the minister's house, a member of the minister's family. At last she received a call from the trustees of the school nearest to that part of the Valley where she was stopping, and after much talk about prices and boarding, and much examination of her qualifications, she was formally engaged to take charge of the youth of Carter Valley.

Alice could not but be amused at the profound questions put to her by the grave old men who waited upon her, neither of whom spoke a single grammatical sentence from the time they entered the house until they left it. In a week more she was duly installed for the spring and summer terms. She was now as happy as one in her circumstances could well be. She was obliged to "board around," but was still to have her home at the minister's, spending the Sabbaths and holidays with his family. This was a great boon to Alice, as she was ever welcome to Mrs. Bright, to whom she could still render valuable assistance with her

needle. Her pupils numbered about thirty, among them eight Carter children. Our readers will scarcely be surprised to know that three of them were Nancy's little girls, ever neat and tidy in their dress, and ever attentive to their lessons.

Alice often wondered over the strange circumstances which had drawn her to this out-of-the-way place to seek a relative who had left it long ago, having little idea that in this quiet spot at the foot of the White Mountains she was to meet the very person who had wrought Harry's ruin and brought about her own misery.

Mr. and Mrs. Bright frequently talked over the singular history of the beautiful young girl who had so ingenuously told her story and sought their assistance and protection, and whom they had so soon come to love and respect for her many excellent qualities and amiability.

Now, while we are loitering around the lovely mountain scenery, we may as well look in upon our old acquaintances, Augustus and Nancy Carter. This winter had brought a boy-baby to them, and we scarcely need say there was great rejoicing, not only among the troop of little rosy-cheeked sisters, but also by the parents of the tiny stranger. He was about six weeks old at the time Alice's school opened.

Carter continued steady, and followed his trade, obtaining plenty of work and ready pay in the growing villages not many miles distant, and the first payment had already been made on their little cottage home. Nancy had had an occasional twinge of conscience—each time a little sharper than the last, but on the whole, had managed to smother its troublesome voice and bid it begone “for this time.”

We must now hasten on to an event which effectually aroused Mrs. Nancy Carter, planting a thorn in her bosom, which no smothering process could lull to rest, which no common regrets

could take away. One June evening, when her little son was about four years old, as she and Augustus were sitting at the open door of the cottage just after sunset, they were surprised to see a man of a tall, lanky appearance approaching them. He looked somewhat curiously around as if in a sort of wonder. They both recognized the man at once, but Nancy was first to speak.

“It's Parkins! Augustus. Ben Parkins! What on earth has brought him here?”

“Sure enough, what?” said Augustus in an under tone. “I hope not to tell on me, Nanny. I hope not that, though I deserve it.”

By this time Parkins had come up. Augustus Carter rose, shook hands with him, and invited him to enter with as much cordiality as he could assume under the circumstances, saying,

“What brings you to this part of the world?”

“Not lookin' for you, surely; though it seems like I've blundered on to you.”

While Carter and Parkins talked on, Nancy prepared supper for the traveller.

“I say, Carter,” continued Parkins, “you seem a trifle more comfortable than of old times, and I'm glad to see it, too. Now, what brings me here is this: My old father found a way to let me know he lives down to Maine; that his home-son, brother Josh, is dead, and he and mother wants me badly to go and take the poor fellow's place and care on 'em in their old age. Now I reckoned I'd foot it, ridin' being rather expensive. Though I've earnt enough in my time I've got nothin' saved, and as I came to this 'ere pretty place I heard it called the ‘Carter Valley,’ and that set me to thinkin' o' you. Then I asked if 'Gustus Carter lived here, and have found you out, you see. Now, if it's convenient, I'd like to stop all night and tell you the news.”

Carter wished him anywhere else, and poor Nancy was ready to cry with vexation.

"You haint heard a word, I reckon, since you left, have you?" he went on.

Both answered "No," and he continued.

"Well, Johnson's finished hisself up; drink'd hisself out o' the world. Not a doubt on it. Made quick work of it 'long to the last, he did, too. Died 'bout five weeks ago. In an awful state he was—wishin' he'd never been born, and all such. I never see nothing like it. Made my hair risé right up to hear him a goin' on. He got the shakes, too—not the *fever shakes*—I know all 'bout them ere—but somethin' that made him see all sorts o' things when there wasn't nothin'

round. Why, he'd be all of a tremble, and pint his finger and tell us to see, when there wasn't nothin' to look at!

"Well, seein' of him made me think I'd better give up drink for good and all, though you know drink didn't never hurt me as it did him. 'Taint no credit to me; I was made up different—could always drink half a-dozen drunk, and keep steady on my legs. You never see me *down*, Carter."

"No—oh, no," replied Augustus, ready to sink with shame, as he thought of the past.

"Well," Parkins went on, "and I hain't took a mite o' sperrits since, and guess I never will. Guess you don't take none now, or things would look another shape round here."

(To be continued.)



HOW SHALL THE NATION REGAIN PROSPERITY?*

BY DAVID A. WELLS.

Wants have their origin in human nature, and are practically illimitable. No one ever has all he wants, though pretension may be made to that effect. In general, every one satisfies his wants by his own labor; but no man who is not a savage or a Robinson Crusoe ever attempts to obtain all he wants by his own labor *directly*, or from the products of one locality; and nature evidently never intended that it should be otherwise. For there is no nation or country or community, nor probably any one man, that is not, by reason of differences in soil, climate, physical or mental capacities, at advantage or disadvantage as respects some other nation, country, community, or men, in producing or doing something useful. It is only a brute, furthermore, as economists have long recognized, that can find a full satisfaction for its desires in its immediate surroundings; while poor indeed must be the man of civilization that does not lay every quarter of the globe under contribution every morning for his breakfast. Hence, springing out of this diversity in the powers of production and of wants in respect to locations and individuals, the origin of trade. Hence its necessity and advantage; and the man who has not sufficient education to read the letters of any printed book perceives by instinct, more clearly, as a general rule, than the man of civilization, that

*As Canadian readers cannot fail to be interested in the statements made by Mr. Wells concerning the commercial relations of Canada and the United States, we reprint this important paper, which appeared in the *North American Review* for September-October. This paper follows one in the previous number of the *Review*, in which Mr. Wells pointed out the fact that the United States enjoys peculiar and exceptional advantages for the production of a very large class of commodities, and that notwithstanding these

if he can trade freely he can better his condition and increase the sum of his happiness; for the first thing the savage, when brought in contact with civilized man, wants to do, is to exchange; and the first effort of every new settlement in any new country, after providing temporary food and shelter, is to open a road, or other means of communication to some other settlement, in order that they may trade or exchange the commodities which they can produce to advantage, for the products which some others can produce to greater advantage. * * *

At the same time this truth, which is in the nature of an economic axiom, ought to be clearly kept in mind, namely, that there is no wealth to be made through trade or exchange of products, beyond the simple economy that results from the producer supplying the consumer cheaper than the consumer can supply himself directly by his own efforts. So much, then, for *why we trade*. A brief word, next, for *how we trade*.

Many, perhaps most, people who have not thought much on the subject—certainly many legislators, to judge from their talk—regard money as essential for trade. They are in the habit of thinking that when we buy anything, it is necessary to give money, and when we sell, to receive money. Money is not, however, absolutely es-

advantages there is a lack of demand entirely and abnormally disproportionate to the amount of such commodities which the country is able and desirous to supply. The world, he says, "finds it for its interest to trade elsewhere," and therefore a large percentage of the labor is without employment, and a large percentage of the fixed capital is unproductive. In the present article he aims to point out a course of policy by which the business of the country can be revived, enlarged and placed upon a broader and more healthy basis.

sential to trade, business, or production. It facilitates trade ; it is a most useful and desirable adjunct of trade, and discharges the same function in trade as a ship, a locomotive, a horse and cart, or a wheelbarrow, though in a larger and higher degree than any of these, or all other similar instrumentalities. These statements are all truisms, the A B C's of economic knowledge ; yet they are not understood by the mass of the people, or by those whom the people select to represent them in legislative assemblies ; and because they are not understood is one great reason why this nation is now in trouble. It is important, therefore, to endeavor to make more clear these truisms by illustration ; such, for example, as is afforded by the analysis of what takes place in the purchase and sale of a pair of shoes.

Ask most people what is involved in such a familiar transaction, and they will tell you, " Why, of course we understand. What a frivolous question ! We went to the shop ; picked out and took what suited us ; gave the shoemaker five dollars, more or less, and departed. That's all there was about it." But hold ! there was a good deal more than that involved in the transaction ; so much more, that he who fully understands it has mastered the fundamental principles of finance, commerce, and political economy, though he may never in his life have read a book or attended a lecture on the subject. What the shoemaker gave was the result of his labor applied to a piece of leather ; as the leather was the result of some other man's labor applied to a piece of hide ; as the hide was the result of a third man's labor given to the raising of cattle. On the other hand, what was given for the shoes in the first instance was a sum of money ; but unless the money was a gift to the purchaser, or he stole it, it was obtained in exchange, and represented some labor or service performed or to be performed in turn by the purchaser. We may therefore eliminate the use of the money from the transaction altogether, as it was simply used as a convenience, as oil is applied to the axles

and bearings of an engine, to make the movements work easy with the minimum of friction. And, eliminating the money, the transaction resolves itself into an exchange of the labor or services of the shoemaker for the labor or services of the man who desires to have and wear shoes. And as every other transaction throughout the world, by which men satisfy their wants and desires by producing and exchanging, or buying or selling, when analyzed, resolves itself into identically the same elements, we are led up to the recognition and acceptance of this broad general principle, namely, that all trade is at the bottom a matter of barter ; product being given for product and service for service ; that in order to sell we must buy, and in order to buy we must sell ; and that he who won't buy can't sell, and he who won't sell can't buy.

Now, to come back to the more immediately practical questions under consideration. Why is there no demand for the multitude of useful things that the United States has the facilities for producing better and cheaper (as can be demonstrated beyond all question) than other countries ? Why is there no opportunity for the multitude of our laborers, who ask for nothing else than that they may have the opportunity to support themselves by producing, and are now denied that opportunity ? One answer is, that the United States for now a long series of years has, in its fiscal policy, denied or ignored the truth of the above economic, axiomatic principles. It has not, indeed, in so many distinct words said to the American producers and laborers, You shall not sell your products and your labor to the people of other countries ; but it has emphatically said to the producers and laborers of other countries, We do not think it desirable that you should sell your products or your labor in this country ; and as far as we can interpose legal obstructions, we don't intend that you shall ! But in shutting others out, we have at the same time, and necessarily, shut ourselves in.

And herein is *trouble No. 1*. The house is too small, measured by the power of producing, for those that live in it. And *Remedy No. 1* is to be found in withdrawing the bolts, taking off the locks, opening the doors, and getting out and clear of all restrictions on producing and the disposal of products.

In fact, the country is very much in the condition of a merchant who has a store advantageously situated, and its shelves filled to repletion with a great variety of desirable goods. The roads that lead up to the store are in admirable condition, with good sidewalks and signboards and lamps to make sure that no one goes astray. But when customers come to the store, they find that the proprietor has taken down the steps, walled up the door, and made it so troublesome to get in that they prefer to journey by longer and worse roads to purchase elsewhere. Even if it is only desired to get into the store, *not* for the sake of trading, but of conversing with the proprietor on the subject, and showing samples of what the outside would like to give for what the inside would like to sell, the outsider (as in the case of the foreign contributors to the late Philadelphia Exhibition) finds to his cost that even this is a very troublesome and vexatious matter.

One of the most striking illustrations to be found in all history—one that is going to stand and be quoted for all time in treatises on political economy—of the evil effect of commercial restrictions in limiting trade and industry, and consequently national development, is to be found in the history of the commercial relations between the United States and the British North American provinces. Thus, in 1852-53, in the absence of anything like commercial freedom, the aggregate exchanges between the two countries amounted to only \$20,691,000. The subsequent year a treaty of reciprocity went into effect, whereby the people of the two countries were enabled to trade and exchange their products with little or no obstruction in the form of import duties. The result was that the ag-

gregate of exchanges rose the very first year of the operation of the treaty from \$20,691,000 to \$33,494,000, which subsequently increased, year by year, until it reached the figure of \$55,000,000 in 1862-63, and \$84,000,000 in 1865-66.* In this latter year the treaty of reciprocity was repealed, and restrictive duties again became operative. The result was that the annual aggregate of exchanges immediately fell to \$58,000,000; and in 1875, nine full years after the expiration of the treaty, when both nations had largely increased in wealth and population, the decrease of trade consequent on the abrogation of the treaty had been but little more than made good; the probable aggregate for 1875 having been about \$86,600,000.

Again, the quantity of freight—meaning thereby commodities—transported on the railroads of the United States, is at present at the rate of about two hundred millions of tons per annum (for the year 1876, a period of great industrial and commercial depression, 197,082,000 tons). If we assume each ton so moved to be worth on an average but \$50 (a low estimate), then the value of the exchanges at present annually effected in the United States, through the agency of railroads alone, excluding all other instrumentalities of trade—boats, ships, wagons, animals, and the like—from consideration, is, in round numbers, ten thousand millions of dollars; or to state it differently, if the present population of the United States is forty-four millions, then every 4,400,000 of its people now exchange annually commodities among themselves through the agency of railroads alone, to the value of a *thousand million of dollars*. It is true that much of this freight is transported backward

*It is not to be concealed that during the last year of the reciprocity treaty, or after a serious movement had been made for its abrogation, importations from the Provinces increased in anticipation of a consequent renewal of the United States tariff. This fact does not, however, affect the general result stated; the exchanges for 1863-64 being more than three times greater than those of 1852-53, the year before the ratification of the treaty.

and forward under different conditions and forms over the same routes, and does not all represent a direct movement between the producers and consumers; but it is safe to assume that not one ton is transported a single mile except for the real or supposed advantage of somebody, representing producer, exchanger, or consumer; and that producer, exchanger, and consumer jointly and severally know what they are about, and wherein is their interest, better than any law-makers can tell them.

On the North American continent, north of the United States, there are at present about four millions of people (3,726,319 in 1871) inhabiting the British Provinces. The line which separates these Provinces from the United States is purely artificial and not natural; and except where a lake or river has been accepted and named as the boundary, no one can readily tell where one country begins or the other ends. It stands, therefore, to reason, that were it not for artificial barriers, arbitrarily set up by legislation, men and commodities would pass as freely between the two countries as they now do between different sections of the Provinces, or between the different States of the American Union, and that the methods and amount of trade over the whole territory under the two governments would be uniformly subject to the same influences. But the United States, with a view of promoting national industry and effecting national development, has been mainly instrumental in establishing all manner of arbitrary and burdensome restrictions on trade and commercial intercourse along this artificial or imaginary line separating the two countries. And now will the people of the United States, divesting themselves of prejudice, stop for a brief moment and consider the result? It is very interesting, very instructive, finds few parallels in modern commercial experience, and may all be summed up in the following brief statement. The aggregate value of all the exchanges between the 4,000,000 of people in the Dominion of

Canada, and the 44,000,000 of people in the United States, for the year 1875 (the latest year for which we have returns), through every variety of instrumentality, was only \$86,600,000; while, as before shown, every 4,400,000 of people on the United States side of the line, under the condition of perfect internal free trade, effected exchanges between themselves, through the agency of railroads alone, to the extent of \$1,000,000,000. Suppose, now, these barriers to trade between the United States and Canada had been taken down. How many wheels, spindles, hammers, cars, boats, engines, and strong human arms would in consequence have been put in motion, and how much of the present industrial and commercial depression in the United States would have been obviated!

Does the United States now desire to augment its present aggregate trade to the extent of many hundreds of millions per annum? The way stands open; and it only remains for the people of the United States who are suffering for lack of employment, and who complain that there is no demand for the products of their industry, to signify that it is their wish, and it will be done. The people of the British Provinces are only too ready to enter into reciprocal and general commercial arrangements with the people of the United States which will result in such augmentation of trade; and there is no ear more quick to listen and respond to the demands of the people than the representatives of the people in Congress assembled. Selfish private interests, on both sides of the line, will promptly respond, as they have heretofore, that it is not desirable that any such commercial arrangement as is proposed should be entered into. But let the people as a whole consider the facts in the case as a whole, and they cannot be long in deciding wherein to them is the path of profit and expediency.

Is it desired to annex the British North American Provinces and make them a part of the American Union? We have as a nation for long years

past, in our dealings with Canada, been playing the part of the wind, in the contest between the wind and the sun in the fable, to see which could make the traveller soonest take off his coat. Suppose as a nation we now for a while put aside the role of the wind and assume the part of the sun. With the balance of advantage in any amicable contest between the two countries for industrial and commercial betterment so transcendently on the side of the richer, most populous, and most powerful nation,* it must be a very low order of statesmanship on the part of the United States which could not devise and carry out a policy that in less than a decade of years would make the British Provinces applicants of their own accord for incorporation as States in the American Union, or would enable the United States, if it was deemed expedient, to force them to become such, by the threat, not of armed compulsion, but of simply clouding the sun. †

* The extent to which Canada is necessarily dependent on the United States for prosperity is well illustrated by the following extract from the "Budget Speech" of the Minister of Finance, Hon. Richard J. Cartwright, before the Canadian House of Commons, February, 1875: "Our distress (industrial and commercial) has been considerably aggravated by external causes over which we had no sort of control. The House knows that the people of the United States have been laboring for two or three years under most unusual depression. The House knows, also, that it is quite impossible for a small community like ours, placed as it is in the immediate vicinity of a great nation of forty-four millions of people, bordering on us for two or three thousand miles,—the House knows, I say, that it is quite impossible that any long-continued permanent depression can exist in the United States without reacting very powerfully upon us. We know that when the prices of American staples are high, ours will be high also. When labor is dear in the United States, it will be dear in Canada; when cheap, it will tend powerfully to make it cheap in Canada also."

† The mass of the people of the United States, occupied with their private cares and business, and giving but comparatively little attention to the details of our foreign relations, probably do not know, what it is full time they should know, that the policy of the United States towards the British Provinces has for a series of years been anything but generous and worthy of a great people. Thus, by the treaty

Thus to illustrate, let us imagine what might be. North of Lakes Erie and Ontario and the river St. Lawrence, east of Lake Huron, south of the 45th parallel, and included mainly within the present Dominion Province of Ontario, there is as fair a country as

of 1871 between the United States and Great Britain, it was agreed that "fish of all kinds, the produce of the fisheries of the Dominion of Canada, shall be admitted into the United States free of duty, fish caught in inland waters and fish packed in oil excepted." But in 1875 Congress, under influence exerted in behalf of the canned salmon interest, imposed a duty of a cent and a half on each quart of contents of "cans or packages made of tin or other material containing fish of any kind admitted free of duty under any existing law or treaty," the effect of which was to nullify, by a small and mean device, an essential part of the stipulated provisions of the treaty; and all remonstrances on the part of the Dominion Government against such enactment has thus far availed nothing. Had a similar act, adverse to the interest of the United States, been perpetrated by any foreign State, words could hardly be found to express the extent of American indignation for so intentional a violation of solemn public engagements; and the Government at Washington would have been quick to demand reparation.

Again, under the provisions of the *existing treaty*, all *sea-fish*, the product of the Dominion fisheries, fresh, dry, or preserved in any way, except in oil, are admitted into the United States free of duty. Under the *existing tariff* all *fresh fish*, intended for immediate consumption, wherever caught, are *also* admitted to free entry. But within the present year the Treasury Department has ruled that if fresh fish imported from Canada into the United States are packed in ice (simply in order that they may be transported to greater distances and supply the immediate demands of more inland markets), the fish in such cases do not then answer to the conditions for *immediate* consumption, and are, therefore, subject to varying rates of duty, according to their species.

Article XXVII. of the same treaty provided that the British Government would urge upon the Government of Canada to secure to the citizens of the United States the use of the canals "in the Dominion on terms of equality with the inhabitants of the Dominion," and the United States in turn engaged to urge upon the State Governments to secure to the subjects of Great Britain "the use of the several State canals connected with the navigation of lakes and rivers traversed by or contiguous to the boundary-line between the possessions of the contracting parties on terms of equality with the inhabitants of the United States." At the same time the free navigation of the St.

exists on the North American continent : nearly as large in area as New York, Pennsylvania, and Ohio combined, and equal, if not superior, as a whole, to these States, in its agricultural capacity. It is the natural habi-

Lawrence River was guaranteed by Great Britain to the United States. Immediately after the ratification of the treaty the British and Colonial Governments made haste to carry out the stipulations on their part in these respects. The St. Lawrence was made free, and the privileges of the Canadian canals were granted to American vessels on the payment of tolls that barely covered the cost of wages and repairs. But up to the present time the Government of the United States have not only failed to do anything to facilitate the transit of Canadian commerce through the States, but they have omitted no opportunity to harass and obstruct it. Thus, the Federal Government (last administration) has so construed the Washington Treaty of 1871 as to withhold from Dominion vessels with cargo the privilege to load in Canadian ports for New York and other ports on the Hudson River ; in consequence of which any merchandise transported in a Canadian bottom can only be taken as far as Albany, and be there entered at customs and transhipped into a United States vessel for transportation to its destination. Technically, the privilege to use the canals does not necessarily imply the use of rivers connecting therewith ; but in the case in question, the New York canals, which the Canadians desire to use, constitute, in connection with the Hudson River, a great marine highway between Canadian ports on the St. Lawrence and the Great Lakes and the United States ports on the Hudson River and seaboard, and the cutting off of any one link or section renders the remainder, nearly, if not quite, practically useless. In a precisely similar case, namely, that of the Ottawa River and the Grenville Canal, the Dominion Government have acceded to vessels of the United States every privilege enjoyed by Canadian vessels, and apparently have never thought that any other interpretation of the treaty could be honestly contemplated.

It was also provided in the same treaty that the value of the privilege then conceded to the inhabitants of the United States by Great Britain, to take fish on the coasts of the British North American Colonies without being restricted, as formerly, to a certain distance from the shore, should be determined by commissioners to be appointed by the respective parties. Six years have now elapsed since the ratification of the treaty, and although the subject has been repeatedly pressed upon the attention of the Federal authorities, it is only within the present year that the United States has been willing to comply with its agreement and appoint a commissioner to take part in the stipulated determination.

at on this continent of the combing-wool sheep, without a full, cheap, and reliable supply of the wool of which species the great worsted manufacturing interest of the country cannot prosper, or, we should rather say, exist. It is the land where grows the finest barley, which the brewing interest of the United States must have if it ever expects to rival Great Britain in its present annual export of over eleven millions of dollars worth of malt products. It raises and grazes the finest of cattle, with qualities especially desirable to make good the deterioration of stock in other sections ; and its climatic conditions, created by an almost encirclement of the Great Lakes, especially fit it to grow men.*

Such a country is one of the greatest gifts of Providence to the human race ; better than bonanzas of silver, or rivers whose sands contain gold. Is it desirable for the United States to own it, and incorporate it as an integral part of the Union ? It can be done. We have only to march an army across the border, intrench and take possession,—but not an army equipped with implements of war, to deprive rightful owners of lawful possession, and to be welcomed in turn by the Canadians with “bloody hands to hospitable graves ;” but an army with plows and reapers and all manner of other improved tools for all manner of useful production, with American capital and American ideas, to be welcomed by the Canadians to peaceful homes and conditions of abundance. At present this land, so favored by nature, is in a great measure unoccupied and sparsely populated, because there is little market for the products of its industry, and the

*“Ontario possesses a fertility with which no part of New England can at all compare ; and that particular section of it around which the circle of the Great Lakes is swept forces itself upon the notice of any student of the American map, as one of the most favored spots of the whole continent, where population ought to breed with almost Belgian fecundity.”—*Report on the Trade between the United States and the British Possessions in North America*, by J. R. Larned, Treasury Department, Washington, 1871.

United States by its policy has practically said there shall be none. Thus emigration and settlement from without has been discouraged. With an area, as before stated, nearly equal to that of the three great States of New York, Pennsylvania, and Ohio, which now have a population of about *twelve* millions, the present population of Ontario is less than *two* millions. During the period of the operation of the Reciprocity Treaty before the war, the ratio of its increase of population was at the rate of 4.38 per cent. per annum, or in a ratio greater than that of the United States at any period of its history; but after the outbreak of our war and the repeal of reciprocity (or from 1861 to 1871) this annual ratio of increase ran down to 1.61, or to a ratio less than that of the United States at any period of its history. Let all barriers to free commercial intercourse and the exchange of products be now removed, and who can doubt that in the course of one or two decades (and what are ten or twenty years in the life of a nation?) there will be gathered in what is now Ontario the material for several great and prosperous States; States whose population originating mainly in the United States, and connected with them by ties of blood, kindred and similarity of thought,—which free intercourse will annually strengthen and not weaken,—will be American rather than Provincial; States whose people, under the representative government now enjoyed in Canada, will largely determine the policy of the whole Dominion, and which will gravitate to incorporation with the American Union as naturally as rivers seek to incorporate themselves with the sea.

But supposing the policy indicated to have been entered upon by the United States, and the anticipated results of development having been speedily attained, the new States across the border, or indeed the entire Dominion, should not then desire to become politically united with us? The answer to this would be, first, that if statecraft had done its whole duty in making the

interests of the two countries common, such an opposition probably would not exist. But if it should, it seems hardly necessary to enter into an argument to prove that the United States could then so modify its commercial policy as respects Canada, as to peacefully and powerfully influence such a union, if it was desired; and that then, and not now, would be the time to enact restrictive laws touching the intercourse and trade between the two countries, with the expectation of thereby promoting annexation of the Provinces.

But why should we ever desire to force the Canadas or the possessors of any other now foreign territory to become part and parcel of the American Union against their will? With the single exception of the satisfaction of a brutal, heathenish sort of feeling which rejoices in the extension of dominion and the enlargement of territory as evidences of the possession of physical power, there is not one single advantage which could come to the United States from Canada annexed which might not in an equal degree be made to accrue, under a rational system of economic laws, from Canada independent. Can any one point out how, with free commerce, a peace policy, and a free popular representative government, the building up of one, two, or three great States on the north side of the Lakes under one flag would be less advantageous than the building up of a similar number of States on the south side of the Lakes under another and a different flag? In the absence of all restrictions on commercial intercourse, the people of New York, Pennsylvania, and Ohio trade among themselves and the rest of the Union when it suits their interest; and when it does not suit, they desist. Under similar conditions of freedom the Canadian states, present and future, obeying a common law of self-interest, would act in the same manner. Whatever products of labor the one at any time desired to sell to the other could only be sold by receiving in exchange an equivalent amount of labor of the other, and if the exchange was not *mutually*

advantageous and profitable, it would not be continued. Under a Zollverein system, such as has been proposed, and is without doubt practical, the national taxation of the two countries could practically be made the same ; while in respect to all other taxation, each State or locality would adopt, as now, that system which seemed to it most expedient, and would come in time to learn that all taxation by diffusion of all kinds ultimately falls on consumption.

But, reasoning from general principles, how much longer, it may be asked, are we to read from the pages of the Book we profess as a nation to believe, that God has made of one blood all the nations of the earth, and then turn away and act as though there was not a word of truth in the avowment ? How much longer shall we turn the pages of European experience during the seventeenth, eighteenth, and a good part of the nineteenth century, before we learn that the planting of colonies and the acquisition of territory for the purpose of compelling trade and profiting by advantages not accorded to other nations, has been a business far more productive of evil than of good ? And when as a nation shall we comprehend enough of the elements of political economy to understand what it would seem ought to come through intuition, "that if commerce is allowed to be free, its advantages will be shared by every country that engages in it ; that in the absence of monopoly the benefits of trade are of necessity reciprocal ; and that in a mercantile point of view it would be as absurd to attempt to impoverish a people with whom we trade" (as we have attempted to impoverish Canada), "as it would be for a tradesman to work for the insolvency of a rich and frequent customer ?" *

* "The great producing regions of the Dominion, which we formerly knew as Upper and Lower Canada, have no Atlantic ports ; they have, however, one capital advantage over us in their mighty St. Lawrence, which affords a water-line navigable for a ship of 1,000 tons, 2,500 miles inland to the very centre of the con-

Left to itself, the average human mind must, it would seem, receive and act upon these truths as if by intuition ; and that it does so tend to act finds a curious illustration in an extract from the last annual message of General Grant as President of the United States.

General Grant, it is well-known, in the earlier years of his Presidency, without apparently having ever considered the danger of further politically incorporating with us as a nation races and states that we cannot politically assimilate or digest, earnestly desired to annex San Domingo, and make it a part of the United States. The scheme failed to receive the assent of either Congress or the nation, and consequently failed ; but recurring to it in his last message, General Grant maintained, that if, "my views [about an-

continent. This great water-way, having its outlet on the fiftieth parallel, is closed to them for nearly half the year. This alone has prevented the Canadas from rising to the condition of a first-class state ; for the practicable and only proper commercial outlets to the great river, for climatic reasons, are the harbors of Boston, Portland, and New York. On the other hand, this great water-way, even when free from ice, and flowing ready to serve the Western States, as their outlet to the ocean, is closed by a barrier far worse than ice, that of the prejudice and non-intercourse worked by bad statutes. The Almighty made the great plains of the West and of the Canadas for the habitation of His children. Between them and the ocean He raised the great Laurentian chain of mountains which we know as the Apalachian range. On the north He opened the river St. Lawrence, and through the frequent gaps in the mountains the way for our iron roads has been discovered. As one country, each section would have supplemented and benefited the other ; but men in their ignorance and prejudices have frozen the river after the ice itself had floated away, and have closed the gaps in the mountain chains, even after the iron road had been laid down in them. Are there words to express the folly of those who would reconstruct the continent more fitly than it has pleased the Almighty to do it ? Are those men statesmen or blind idiots who render the labor of man more arduous, who double the sweat of the brow, and serve but half the loaf that might be eaten ? These are not mere questions of a dollar more or less, but they are questions that lie at the foundation of human society, and that are a part of social ethics."—EDWARD ATKINSON, *Address before the Boston Board of Trade, 1874.*

nexation] had been concurred in, the country would be in a more prosperous condition to-day, both politically and financially." And for this belief he gives the following reasons: "Santo Domingo is fertile, and upon its soil may be grown just those tropical products of which the United States use so much, and which are produced and prepared for market now by slave labor almost exclusively, namely, sugar, coffee, dyewoods, mahogany, tropical fruits, tobacco, etc." He next proceeds to show, that of the above enumerated useful commodities, Cuba and Brazil furnish the United States at present with the larger portion of their needed supplies; but that legislation, "particularly in Cuba," is "unfavorable to a mutual exchange of the products of each country." San Domingo annexed, the following changes, in the opinion of General Grant, would immediately occur: All that is produced in Cuba could be produced in Santo Domingo. Being a part of the United States, *commerce between the island and mainland would be free; there would be no export duties on her shipments, nor import duties on those coming here. There would be no import duties upon the supplies, machinery, &c., going from the States.* All restrictions on commercial intercourse being removed, "hundreds of American vessels," he continues, "would now be advantageously used in transporting the valuable woods and other products of the soil of the island to a market, and in carrying supplies and emigrants to it. The island is but sparsely settled, while it has an area sufficient for the profitable employment of several millions of people. The soil would have soon fallen into the hands of United States capitalists. The products are so valuable in commerce that emigration there would have been encouraged. The emancipated race of the South would have found there a congenial home, and where their labor would be so much sought after that the poorest among them could have found the means to go."

Whether all these glowing anticipa-

tions would have been speedily realized had the proposed scheme of annexation been carried out may well be doubted. But apart from matters of conjecture, it is interesting to note how quick and keen a mind, which showed itself so little acquainted with industrial and commercial matters as that of General Grant, was to discern the benefit that might follow the removal of all restrictions on exports and imports and intercommunication between the United States and the island of San Domingo; and at the same time how utterly incapable it was to perceive that it was not necessary for the United States to annex and own San Domingo to secure such a degree of commercial freedom between the two countries; that all barriers in the way of attaining such a result were not natural, but mainly and artificially created by the legislation of the United States; and that there was nothing which the people and government of San Domingo would do more willingly than to admit every product of the United States, free of impost, into their ports, and accord all manner of other privileges to citizens of the United States on their island, on condition that the latter country would, in turn, allow the peculiar products of San Domingo to be imported into the United States on the terms that they would be, had the scheme of annexation been perfected, that is, free of duty.

The effect of arbitrary legislative restrictions on the international exchanges between the United States and the British Provinces, in hampering and diminishing the *general* business of the country, has been pointed out; but the effect of such restrictions on particular branches of business, obtained by analyzing the details of such exchanges, are equally significant and instructive. The case of the export of *manufactured* lumber is especially a case in point. Thus before the expiration of the reciprocity treaty between the United States and Canada, in 1865, when Canadian lumber could be imported into the United States free of

duty, a very considerable business existed, all the way from Eastport, Maine, to New York, on the Atlantic coast, and also at certain points on the lakes, in importing Canadian lumber in the rough, working it up by machinery into the ready constituents of houses,—boards, flooring, shingles, doors, paling, sash, blinds, etc.,—and shipping it to the West Indies, South America, Cape of Good Hope, Australia, and other countries, where labor was scarce and machinery almost wholly wanting. Of this business the United States, previous to and during the first two years of the war, had almost entire control; and it is doubtful if even so much as one vessel up to that time left the Dominion waters for a foreign port loaded with any such manufactures. The great increase of prices and wages during the war, coupled with the presence of Confederate cruisers upon the high seas, as might have been expected, materially affected the extent of this business; but immediately on the termination of the war the export increased and gave evidence of complete revival. But when the reciprocity treaty was repealed in 1866, and Canadian lumber was in consequence of the duties on its import in the United States, made twenty per cent. more expensive to manufacture on this side of the boundary-line between the two countries than it was to manufacture on the other side of the same line, the increase was checked and the revival did not take place. American manufacturers moved their capital and machinery across the borders, or entirely abandoned the export business; while Canadian manufacturers made haste to take up the business where the Americans dropped it, or rather, by the action of their own government, were forced out of it. So that, whereas in 1863 few vessels loaded with manufactured lumber sailed out of the ports of the British Provinces for foreign markets, the number of such vessels so loaded and sailing in 1871 was reported in excess of *seventy*; the shipments of lumber, in great part manufactured, from the port of St.

John, New Brunswick, to the British West Indies for example, increasing from \$16,000 in 1855 to \$550,000 in 1872; to the Spanish West Indies from \$269,000 to \$882,000; and to South America from \$18,000 to \$127,000, during the same period. On the other hand, the exports of manufactured lumber from the United States have never regained the proportions that they attained prior to the war, \$1,882,000 in 1875, as compared with \$3,158,000 (gold valuation) in 1857, and \$2,703,000 in 1860. The annual exportation of all lumber from the United States, from 1865 to 1874, has also remained almost stationary; while the amount of lumber imported from the Provinces into the United States has increased, notwithstanding the duties and a large augmentation of prices, to meet home necessities.

But the commercial relations between the United States and the British North American Provinces are by no means peculiar or exceptional. They are, in fact, the type of the commercial relations which the United States has established with most or all other countries; and it matters little at what point one begins to investigate it. For he will find everywhere evidence, amounting to demonstration, that the development of the industry and commerce of the United States has been most disastrously checked, and the present state of business depression in a great degree occasioned, by the persistent refusal to recognize, in our commercial and fiscal legislation, the simplest principles of political economy. In further proof of this, attention is next asked to the character of our commercial relations with Chili,—one of the most prosperous of the South American States. The manufactures of Chili being few and rudimentary in the extreme, its people import from other countries nearly all that they require of cottons, woollens, hardware, agricultural implements, and other machinery, paints, oils, gunpowder, earthen and glass ware, boots and shoes, straw goods, etc., etc. The largest single item of their imports is

cotton cloth, of which Chili imported for domestic consumption during the year 1874—a year of great commercial depression—from Great Britain more than 55,000,000 yards; and from the United States during the same year, a quantity not in excess of 5,000,000 yards; or, in other words, this little State, one of the smallest among the nations, with a population of about 2,000,000, imported more cotton cloth, to supply her wants, from Great Britain in 1874 than the United States exported that same year in the aggregate to *all* foreign countries combined. During the year 1874 many of the cotton-mills of the United States stood idle or worked on reduced time, for the reason that no market could be found for their products; but had the United States been able to supply Chili during that year with 55,000,000 yards of cotton cloth, the demand would have sufficed to have kept about 150,000 spindles (No. 14 yarn), or about one quarter of the cotton-mills in the State of New York, in active operation for every working day in the year; and the withdrawal of the products of these mills from competition in the domestic market would probably have enabled many other mills in the country to have avoided suspension, to the great benefit of labor and to the diminution of destitution and idleness.

Now what was the reason that the United States were unable to sell but five millions of yards of cotton cloth in 1874 to Chili, while Great Britain could sell in the same year fifty-five millions? Not that the people of Chili preferred English cloth to American, for the general testimony is to the effect that the American cloth is better. Not because the people of Chili were unwilling to trade with the people of the United States, for the relations of the two countries have always been in the highest degree friendly; and then again, sentiment has very little to do with trade nowadays. Trade knows little and cares less of the places and nations where goods are made, and nations, alike with individuals, every-

where buy and sell as they think they can best subserve their own pocket interests. "Exactly so," will doubtless be the remark of some readers at this point. "England supplies Chili with cotton cloth rather than the United States, because of the advantage which comes to her through the possession of cheaper, or, as many are pleased to term it, pauper labor." But hold! England indeed has an advantage, but the advantage does not come in here. All recent investigations and practical experience have shown that in respect to the coarser cotton fabrics which constitute the bulk of the world's consumption, the United States can now manufacture full as cheap, and probably a little cheaper than Great Britain. There are cotton-mills now running in New England whose products are, and for the past year have been, largely exported and sold, after paying freights and commissions, at a profit in London, Liverpool, and Manchester. Cotton goods made at Fall River, Massachusetts, and shipped to England, have been re-shipped by Manchester firms to foreign markets at a profit. According to the recent investigations of Mr. Atkinson (see communication to the *New York Herald*, April 24) the cotton-spinner in New England has, and for several years past has had, an advantage in the price of his cotton over the cotton-spinner of Manchester, England, of three-fourths of a cent a pound on the cost of his cotton, which would admit of the New England manufacturer paying thirty-three per cent. higher wages than his English competitor, "and yet make the thirty-inch (cotton) drill at the same cost." But the American cotton manufacturer does not pay thirty-three per cent. higher wages than are paid for similar labor in Great Britain. On the contrary, according to Mr. Atkinson, all the evidence obtainable is to the effect that "the cost of labor per pound or yard of cloth is now as high in Great Britain as it is in New England, and, according to some of the evidence, the cost of manufacturing is to-day less in New

England than in Great Britain." "This difference the English manufacturer has of late only surmounted" (we continue to quote from Mr. Atkinson) "by adulterating his goods with starch, clay, barytes, and other substances—a practice which is now reacting, and which, in the long run, will not succeed." In the cost of producing cotton goods of the same quality suitable for the Chilian market the advantage, therefore, is clearly with the American rather than the British manufacturer; and, other things being equal, the American ought to have the trade. But other things are not equal; and in one particular especially the English manufacturer enjoys an advantage over the American, and by the American's own act and volition, which in the race for competition leaves the American nowhere. The Englishman recognizes the truth, and acts upon the basis, that all trade is barter, product being given for product, service for service; that to sell one must buy; and in supplying Chili with cotton cloth he takes his pay for his cloth in what Chili has got to pay with. The American manufacturer, on the other hand, refuses, or by the act of his own government is not allowed, to take his pay *directly* in what Chili has got to sell; and as a consequence has not, and as long as he continues to pursue the same course never will have, any considerable trade with Chili.

Thus, the commodity which Chili has mainly to sell is copper ore; out of a total export in 1872 of about \$30,000,000, more than one-half in value (\$17,500,000) consisting of ores of copper, copper regulus, and unwrought copper. Another important article of Chilian export is wool. Now the method of trade between Great Britain and Chili is as follows: British ships, loaded with cotton goods (average 55,000,000 yards per annum), hardware, paints, machinery, paper, etc., sail for Valparaiso, earning freights. Arriving in Chili, the cargo unloaded is replaced with another cargo of copper ores or wool, and the ships return to England, earning other

freights. Profitable employment is thus given to many British ships, and an explanation in great part afforded of the continued supremacy of the British commercial marine, which strengthens and increases just in proportion as trade increases. Arriving in England the copper ores are sold to the copper-smelters at Swansea, in the south-west of England; who, in converting them into mercantile forms, employ English labor, English capital, English railway service, and consume large quantities of English coal. Smelted into ingots, rolled into sheets, or converted into yellow-metal, or brass, the Chilian copper is finally sold to whoever in the world wants to buy—and all the world always does want to buy copper under some conditions,*—and out of the proceeds of the sale the Swansea smelter pays himself, pays the cotton-spinner, the shipowner, the coal-miner, the common carrier, and all others concerned; the movement, as a whole, being in the nature of a great circle of transactions, in every one of which some profit accrues to English capital and some opportunity for employment is afforded to English labor. But in this great, and special circle, of production and exchange American capital and American labor find no place.† Other interests have in effect said to Congress, a dollar made in

*Consider the conditions under which that part of the world known as the United States buys. English yellow metal is admitted free of duty if used on American vessels not engaged in the coastwise trade; while the copper ore and copper out of which this very yellow metal is made are excluded from our ports by the excessive duty imposed on their importation.

†The extent of this special circle of industry and commerce, from which the United States has excluded its labor and capital, is strikingly illustrated by the following figures: For the year 1875 the United States exported 5,147,140 pounds of unmanufactured copper, of the value of \$1,046,227; and of brass and manufactures of copper and of brass, to the value of \$1,125,711; total, \$2,271,938. During the same year Great Britain exported of copper, wrought and unwrought, and of brass and yellow-metal, 1,001,940 cwt., having a declared value of \$24,910,250; an amount greater than the value of all the wheat, in the form of flour, exported from the United States during the same year.

copper-mining in the United States is worth more than a dollar made in copper-smelting in the United States, although the copper-smelting forms the link in a chain of transactions, which, uninterrupted, will allow of a great and continuous commercial current, and which in turn will give employment to ten dollars of capital and ten laborers where the interests of copper-mining will employ of each but one. And Congress has thus far listened to the demands of the *small* and crushed the interests of the *great*, and since 1869 has imposed rates of duty on copper and copper-ore, which really were not needed to sustain any American interests, that have made the importation of either of these commodities into the United States practically impossible. Previous to 1869 this was not so. Then under a duty of five per cent. *ad valorem* copper ores, obtained in exchange for various products of American labor in Chili, on the coast of Africa, and in the West Indies, were imported in considerable quantities, and large works existed in Boston and New York harbors and in Baltimore for smelting them in connection with American ores that mixed advantageously. But no smoke has come out of the chimneys of any of these works since the imposition of the existing duty, and so long as it is continued none ever will.

In 1876, there being an evident opening for the sale of American farm products, cotton fabrics, machinery, hardware, etc., in Chili, a line of steamers was started from Boston; owned in great part in the United States, but of British build and register, carrying the British flag and commanded by an English captain. After a year's experience, the agents report that they succeed tolerably well as to outgoing cargoes, but are embarrassed about the return cargo; and ships to be profitable must earn freights both going to and returning from a market. These Boston steamers, to obtain a return cargo, have therefore been obliged to take Liverpool freight and transship it at Boston; several

hundred tons of copper in one instance, for example, having been recently brought by one steamer to Boston. But as this cargo could not be profitably landed at Boston, paying duty, it had immediately to be sent to England.

Another important article which Chili has to export, and give in payment for foreign products, is nitrate of soda (Chilian saltpetre), largely used in the manufacture of gunpowder, sulphuric and nitric acids, and for fertilizers; and our recent industrial and commercial experience with this raw material for manufacture as strikingly illustrates the beneficial effects of exemption from governmental interference, as our recent experience with that other raw material, copper, illustrates the disastrous effects of such interference. Prior to 1870 nitrate of soda was subjected on importation to a duty of one cent per pound; since 1870 it has been admitted free of duty. Note the effect. The imports, which in 1869-70 were 28,867,000 pounds, have increased to 51,887,000 in 1876. Who and what has been benefited. *First*, the carrying trade between the United States and Chili. *Second*, the general industry of the United States, for the labor embodied by the Chilians in digging and shipping the saltpetre has been compensated by an equivalent amount of labor embodied in some products (manufactured) of the United States—nearly two pounds of nitrate of soda being used for the manufacture of gunpowder, nitric and sulphuric acids, and fertilizers, where one was used but a few years previous. *Third*, the powder, acid, and fertilizer makers, and the bleachers and dyers of the United States, who, having a part of the tools (raw materials) of their trade cheapened, have evidently sold more, and been enabled to sell cheaper, and so better contend against foreign competition in the production and sale of similar products. And who and what has experienced anything of detriment by the remission of duties on this Chilian saltpetre? The United States lost an amount of annual revenue (1869-70)

of \$288,000, which was probably not one-twentieth of what the country gained indirectly, reckoned in money.

Leaving now Chili, and crossing the continent to the east, we have the Argentine Republic, another South American State resembling Chili. Its importations for the year 1874 were as follows: From England, \$21,405,000; from France, \$19,836,000; from Belgium, \$16,777,000; and from the United States, \$3,945,000, with exports to the United States of \$3,747,000. An analysis of this insignificant trade between the United States and the Argentine Republic shows that it consisted, during the year specified, mainly of lumber, with some kerosene, tobacco, railway supplies, alcohol and whiskey, furniture, machinery, and a few other articles, exported from the United States, which were paid for mainly (to the extent of about two-thirds) by an import from the Argentine Republic of dry hides, together with a little wool; and small as was this trade in 1874, the latest consular advices report it as diminishing and not increasing. During this same year the export of cotton goods from Great Britain to the Argentine Republic was in excess of forty millions of yards; while for the year 1875-76 the export from the United States of these same fabrics to this same country was practically nothing—155,000 yards being officially reported.

The explanation of this curious commercial phenomenon is not, however, at all difficult. The principal commodity of domestic production which the Argentine States have got to give in exchange (or pay with) for the commodities of foreign production which it desires to have, is Mestiza wool; which, in connection with sheepskins and tallow, comprises about two-thirds in value of the entire exports of the country. The United States could use Mestiza wool in large quantities, and pay for it in cotton goods and other manufactures, if our manufacturers were allowed to buy it. But this they are not allowed to do; for the duties on the import of this description of

wool are all but prohibitory, and under such a condition of things there can be but little trade.

It is useless to expect to ship goods to Buenos Ayres to the growers of Mestiza wool and ask money in exchange; for they cannot pay money, even if the prices of our merchandise are considerably lower than the prices of corresponding English products, for they have not got it. There is no coin of any kind in circulation in the Argentine States, not even for small change, and the paper money used is of the most depreciated character. Hence, so far as we shut Mestiza wool out, we shut American cotton fabrics and other merchandise in. England, on the other hand, imposing no restrictions on the trade with wool, the wool product of the Argentine States finds its way mainly to England, and is paid for, primarily, with English goods; and this in the main also is the reason why England, in 1874, sold to these States merchandise to the value of seven dollars where the United States sold one. If it now be rejoined that, in proportion as we exclude and use less of Mestiza and other foreign wools, the greater the amount of home-grown wool we will manufacture, and the larger the quantity of home-manufacture we will sell to the American wool-grower for consumption, the answer is, that any such rejoinder will not be in accordance with experience. For (as will be hereafter demonstrated) the home producer of wool has always obtained the highest prices, and has raised proportionally the largest quantity, when foreign wool has been free of duty; while at the present time, with duties on the importation of foreign wools that are practically prohibitory, he is obtaining the lowest prices for his product, and buying the smallest quantities of other domestic merchandise.*

The same obstacles in the way of

*Address of Edward Atkinson before the New England Cotton Manufacturers' Association, April 28, 1876.

an extended commerce between the United States and the Argentine States also exist and operate on even a larger scale in respect to the trade between the United States and Australia and New Zealand. The rapid development of these British colonies in the South Pacific is one of the wonderful social and economic phenomenon of the latter half of the nineteenth century; the aggregate of their exports and imports (with a population of 2,278,000) for 1875 being \$458,399,000, or more than three-eighths of the aggregate foreign trade of the United States, with a population of about 44,000,000, for the same year. During the year 1875 these colonies imported, paid for, and consumed commodities of foreign production to the extent of \$236,000,000; and of these the United States furnished so small a proportion that in the official and general summary of our exports (see Report of the Bureau of Statistics, 1875-76, p. 110) our Australian export trade is not considered of sufficient importance to have a special enumeration, but comes in under the general head "Domestic Exports to [all] the British East Indies, Australia [and New Zealand] for 1875, \$3,978,000." And yet an

examination of the details of this small export shows that the Australians found it for their interest to buy a little of almost all the manufactured products which it is particularly for the interest of the labor of the United States should be sold abroad; and this, too, when the Australian markets were undoubtedly fully stocked with similar articles, the products of other foreign countries. If it be asked why these British colonies did not buy more of us, the answer is simple, and in the main is the same as must be given to the question, Why do not the Chilians and the people of the Argentine States of South America buy more? It is because the people of the United States will not take their pay for what they want to sell in what the Australians and New-Zealanders have got to pay with, mainly, wool and copper; and the enemies to the development of American industry are not, as it is continually and most imprudently asserted, those who desire freer trade as a part of the fiscal policy of the United States, but those who demand that the existing obstacles to trade which have been pointed out, and the injurious effects of which are so obvious, shall be continued.—*North American Review*



Young Folks.

THE STRAY CHICKEN.

"Papa, papa," shouted little Harry, rushing into the breakfast-room one bright morning in June, "only see what I have found! Just see; isn't it a darling?" and he unclosed his chubby hands, where he had something clasped very close, apparently for safety, and brought to view a plump, snowy chicken.

"Why, Harry, my boy, where did you get this?" said his father, setting down his untasted coffee, and taking the trembling little chick from the fingers which were still too closely clasping it.

"Out there, just under the garden gate," said Harry, his fine eyes dancing with excitement. "I went to pick a rose for Aunt Hester, and I heard something 'peep, peep,' and oh, there it was; and, papa, can't I have it for my very own?"

"I am afraid not, my son," said Mr. Drew. "It must belong to old Mrs. Carey just opposite. I have noticed she keeps a good many fowls."

"But, papa, I found it, you know, and it is such a tiny little thing nobody would ever think of claiming it."

"The greater reason why you should restore it to the owner. It is not yours, my boy, and to keep it would be nothing less than a theft."

Harry opened his blue eyes wide in surprise.

"I did not thief it, papa. It came to me itself."

"Still it would be wrong to keep it. I will give it to Aunt Hester, and after breakfast we will decide what shall be done with it."

Forcing back the rebellious tears,

Harry took his place at the breakfast-table as his treasure was borne from the room by gentle Aunt Hester. He was a very little boy, and though he wanted to do right, yet he could hardly understand why he could not be allowed to keep the chicken, just as he was allowed to keep a gay flower, a curious pebble, or any other thing he might happen to find. His mamma had died long before Harry could remember, and his papa's only sister, Aunt Hester, lived with him, and took care of the little boy. She was very kind and loving, and Harry loved her dearly, but sometimes he could not help wishing for an own, own mamma, like all the little boys he knew of had.

After breakfast Aunt Hester called him to her, and very gently and lovingly explained to him why he could not keep the chicken. When she saw that he understood her, she gave him a little basket with Chickie cosily nestled on some wool in the bottom, with instructions to carry it home to Mrs. Carey, and explain where he found it.

Poor Harry! his little heart was very full at the thought of giving up his pet, and on reaching Mrs. Carey's door his feelings so far overcame him that, after kissing it repeatedly, he could only set it down very gently on the kitchen floor and run home without speaking a word.

"Harry, come here," called his aunt an hour later, as she noticed his red eyes and rueful looks as he wandered listlessly about the garden. "Shall I tell my little boy about a trouble his

papa and I once got into by loving chickies too well?" said his aunt, tenderly kissing him as he came up on the cool verandah where she was sitting.

"Oh, yes, Auntie, do please," said Harry, his face lighting up; "where was it, and when?"

"When we were not much older and larger than you are, Harry, and up in the country at Uncle William's, where we spent the greater portion of our time in childhood."

"Was it for not carrying home chickens that did not belong to you?" asked Harry, innocently.

"No, not exactly for that," said his aunt, with an amused smile, "but you must stop asking questions, dear, or there will soon be no story to tell. When dear papa, your grandfather, died, mamma and Herbert and I went up in the country to live with Uncle William. He was mamma's only brother, but somehow we children never could learn to love him. I think it was because we were so much afraid of him. He was a dark-browed, stern-visaged man, and I do not remember of his ever giving us a kind word or a pleasant smile, though he was never positively unkind. Mamma used to say he was like a nut—all the goodness and sweetness lay inside the rough kernel. At all events, frightened by his austere manner, we used to give him a wide berth, and never made any attempts to ingratiate ourselves into his good graces. Aunt Sophie was a pleasant-faced, cheery little woman, all kindness and good-nature, and with her we got on amazingly. She had no children of her own, so she petted and spoiled us to her heart's content; indeed, her friendship stood us in good stead many times when we were in disgrace, either through thoughtless misdeeds or premeditated mischief. Uncle William had a large and profitable farm, and took a kind of justifiable pride in keeping everything about it of the very best and latest kind,

and in the very best order. His horses, oxen, sheep, cows, etc., were acknowledged to be the very best in the county, and his farming implements were all of the newest and most improved kind. Aunt Sophie, too, was a model of a housewife; 'a place for everything and everything in its place,' was her favorite saying, and I may add doing, as well, since everything was kept with the most exact neatness and order.

"After we came there to live, things were often pulled about and put out of place, and though Aunt Sophie laughed good-naturedly over it, this was always a source of annoyance to Uncle William, and his petulance in this respect only increased our dread and dislike of him. The spring following our arrival at the farm Uncle William, after considerable trouble and expense, had succeeded in securing some eggs of a species of poultry called the Shanghai, at that time very rare in that part of the country. These with great care were placed to hatch under an enterprising barnyard biddy, and in due course of time eight of the loveliest little chickens came peeping out of their shells, to the great joy of Herbert and myself, who from the first had petitioned to have all the care of the little pets ourselves.

"This request had been very reluctantly granted by my aunt, after we had given many promises to be very careful, to give them only their proper allowance of food, and not to touch or handle them in any way. The chickens throve wonderfully under our care, for we loved them too well either to hurt or neglect them; though I must say, Aunt Sophie kept a sort of supervision over them herself, for she knew how anxious Uncle William was, and how angry he would be if anything should happen them.

"Things went on prosperously for a while, until one morning mother hen, to our great surprise, positively refused to have anything more to do with her

little brood, but went about the barnyard singing gaily, and apparently as indifferent to the pitiful chirp of her little ones as if she had never professed to love or care for them. If one of them even ventured too close to the maternal quarters it was rewarded by an angry peck, which sent it trembling and crying back to its comrades. Of course we were very indignant at this cruel desertion by the heartless mother, and redoubled our care and attention of the hopeless chicks, until we even fancied they scarcely missed her at all, so perfectly satisfied did they seem to be with the pile of good things placed before them—for Herbert and I shared our dinner with them that day.

“But when night came our real difficulties began. The Shanghais are much larger than the common barnyard fowl, and at one month are nearly as large as they would be at two; this probably accounted for the mother bird abandoning them at so early a date. There is also this difference: instead of changing their feathers gradually as other chickens do, they appear to shed them all at once, and, consequently, are at that period almost destitute of feathers. Our poor chickens were in that forlorn condition now, and how we were to care for them or keep them warm through the long and still somewhat chilly night was a puzzle. Aunt Sophie was consulted, and by her advice we constructed a warm shelter for them in one corner of the woodhouse.

“Still, we were far from satisfied when we saw the poor little things huddling closely together and crying piteously. We added extra covering to their already warm perch, but all would not do. Aunt Sophie was again consulted, and she assured us they were not cold, but only complaining for their mother; they would be all right in a few days. Yet we could not be comforted, and long after we were put to bed we lay awake listening to their doleful ‘peep,

peep, peep,’ until we could bear it no longer. The little room where we slept was adjoining that of the kitchen stair, which was used as a sort of store-room for general purposes. At that time a large pile of soft, clean wool lay on the centre of the floor, which Aunt Sophie had picked and prepared for the carding-mill. It was all ready now to be put up in bundles and taken away. Quietly dressing ourselves, we stole softly down the kitchen stair, unbarred the door, and slipped out into the woodhouse. Soon we crept quietly back, each with an armful of chickens, which we deposited safely in the wool. A second trip down and we had all the chickens snugly in their woollen nest. Still the peeping did not altogether cease, and in our anxiety we piled more and still more wool over them. After a while all was quiet, and then we crept back to bed, very thankful that our little pets would be comfortable for at least one night. As soon as it was daybreak I awoke Herbert, and together we proceeded to carry the chickens down again before we were discovered. Groping our way to the pile of wool we began to feel about for the chickens, and as soon as they were found, we placed them in the skirt of my dress, which I held up as a sort of basket to receive them. One, two, three, four, five, six, seven, eight; at last we had them all, and cautiously stole down stairs again. How those stairs would creak as I came slowly tugging my heavy load behind Herbert! Panting, at last we reached the woodhouse, and I turned the chickens from my lap on the ground, expecting to see them jump up and scamper off. But imagine our horror and amazement when they lay there perfectly motionless! Hastily picking one up we proceeded to examine it, and too soon found out the truth—they were dead! smothered in the wool! In vain we rubbed and fussed with them, endeavoring to blow breath into their clammy

bills. It was of no use. They lay there as limp and lifeless as ever.

“Presently we heard footsteps in the house, and then the rattling of the kitchen stove, preparatory to making a fire. Uncle William would soon be out upon us. What were we to do? In our mortal terror of his wrath we never stopped to consider anything, but Herbert caught up an armful of the chickens, I huddled the remainder together in my dress, and away we sped around the front of the house, through the garden and up in the orchard; taking refuge at last behind a large, old-fashioned limekiln, which effectually screened us from sight of the house. There we crouched, shivering with cold and terror, for we were only partly clad, bare-footed, and the cold grass was wet and heavy with dew. At last Herbert stole cautiously back to reconnoitre, and returning reported the coast clear. Uncle William was at the barn, and Aunt Sophie busy in her dairy. Now was our time. Taking the poor dead chickens in our arms we consigned them with many, many tears to their grave in a large branch of double tansy which grew in profusion around an old apple tree near by. This done, we crept stealthily up to our room again, and back to our little beds, where we lay very quiet until Aunt Sophie called us to take the cows to pasture. This was our usual morning task, and had always been performed with alacrity, but this morning it was anything but a pleasure. We dreaded to go lest in our absence Aunt Sophie should discover the loss of the chickens and make enquiries; but, fortunately, it was churning morning, and she was too busy to think of them. As we took our places at the breakfast table, I think mamma was the only one who noticed anything unusual in our looks or manner, but she asked no questions, for which we were very thankful.

“We coaxed mamma to allow us to

take our dinner with us to school that day, and when she kissed us good-bye at starting, and told us to be good children for her sake, we felt very unhappy indeed. How we longed to tell her all, but dared not! What a long, miserable day that was, and how wretched we were!—though I am not sure but our fear of Uncle William’s anger was greater than sorrow for the loss of our pets. We reached home in the afternoon, to meet Uncle William with a very stern, angry face, and mamma in tears.

“‘Have you seen anything of the chickens, children?’ was his first question as we entered the door.

“‘What chickens?’ we faltered.

“‘What chickens?’ he returned in a loud, threatening tone; ‘none of that, if you please. You know very well what chickens I mean. Do you know where they are?’

“An appealing look from mamma made us almost decide to tell the truth, but a second look into his angry face drove the good impulse back again.

“‘No, sir,’ we replied, firmly, ‘we have not seen them.’

“‘Nor know nothing at all about them, eh?’

“‘No, sir.’

“‘Oh, Herbert! oh Hester!’ moaned mamma.

“‘How comes it then that I find my chickens dead in the tansey bed, their mouths filled with wool, and tracks of bare feet from the orchard through the garden and up the back stairs to your room?’

“We turned pale at this unlooked-for discovery.

“‘You see you are fairly caught now. There is no backing out. You put the chickens in the wool and smothered them, then hid them in the tansey, and then lied to hide it all,’ and he deliberately took down a large rawhide whip.

“‘Oh, mamma, save us! Save us!’ we shrieked in terror.

"'No,' she replied coldly, 'I can do nothing for you. Uncle William would not have punished you had you told the truth about it. As it is, you must take the consequences of your act.'

"Aunt Sophie pleaded for us, but in vain. Uncle William was inexorable. Down came the pitiless lash, and then and there we received the only sound horsewhipping we ever got."

"Oh," said Harry with tears in his eyes, "how could he be so cruel?"

"I thought so at the time, Harry," said his aunt; "I thought he was very cruel and unkind, but I believe now he did the very best thing that could be done. He taught us a lesson that we never forgot. It is an awful thing for little children to soil their souls and lives by falsehood and deceit. The Bible says 'Lying lips are an abomination to the Lord.' I hope you will remember this my dear, when tempted to speak an untruth."

The latching of the garden gate at this moment caused them both to look up, and they saw Mrs. Carey's maid coming up the gravel walk with some-

thing carefully concealed under her apron.

"What is it?" asked Miss Drew, as she stood smiling and curtsying before them.

"Please mum, Mrs. Carey says as I was to give this to the little man with her best love," and she drew forth the stray chicken, and held it with a broad smile toward Harry, "and say he was a little gentleman to bring it home so carefully."

"Oh, my chicken! my dear little chicken!" shouted Harry, kissing it rapturously, and dancing up and down the verandah; "thank you, oh, a thousand times. See, Auntie dear, see. Ain't you glad I have got it back again?"

"Yes, Harry dear, I am; but more glad than I can tell you that it is now honestly yours, and I am sure the possession of it now gives you far greater pleasure than if you had kept it by unfair means. Always do right, my boy, at any cost, if you wish to be useful and happy, a blessing to yourself, your family and friends."

LESLIE BELLINGHAM.

MYSTERY.

BY MRS. JAMES A. FIELD.

What is this in a golden case,
Holding its little hands up to its
face,
Going *tick-tick, tick-tick, tick-tick-tick,*
Never too slow, and never too quick?
Hold it up to the baby's ear!
Tick-tick-tick—does the baby hear?

Life lies for him in a golden case;
The world is a strange and beautiful
place;
On the border-land of eternity,
He sweetly wonders what time may be;
For, shut in a watch's narrow rim,
It is only a tick-tick-tick to him.

—*Wide Awake*

OUR PETS.

In addition to the usual "well-spring of joy" always to be found in our large and healthy family, for the space of twenty odd years, we possessed another and never-failing source of pleasure, interest and amusement, in the numerous petted animals that from time to time took up their abode with us. It might be reasonably supposed that ten children would create sufficient interest, to say nothing of employment, and that pets in such a case would be superfluous. I have observed, however, that where the heart's door is kept wide open by plenty of little children there is generally a cheerful welcome for all at the hospitable hearth; every creature, from a wayfarer to a canary, is freely received and kindly treated, and so it is that homes full of children are also generally full of "pets."

Our first pet was a monkey, bearing the not uncommon name of "Jocko." He was a small creature, very scantily provided with hair, very ugly, but so intelligent that his appearance was voted to be beneath consideration. The little thing was sent to us when quite young, and as he grew, surrounded by children, he adopted our ways to such an extent as to make him appear almost human. He could imitate us, but, as my mother thankfully observed, we could not imitate him, and certainly one monkey was enough. We taught him to wash himself, clean his teeth, use a knife and fork, and generally to conduct himself "like a Christian," as we phrased it. He also became an expert in gymnastics and dancing, and learned to wait very cleverly at the hall door, a performance that was not always appreciated by our more timid visitors. Many ran away

screaming at the sight of the little black, jabbering creature, and could hardly be persuaded that he was perfectly harmless. Jocko's grand exhibitions, however, were always of his own invention. It was my mother's custom, after undressing us for bed, to hear her youngest child say his prayers at her knee, while the others repeated theirs in silence and with due solemnity. One evening, while three of us were devoutly kneeling at our bed-sides, and little Arthur was lisping "Now I lay me," my mother's eye caught an unusual sight, a fourth little white-robed figure, with black uplifted hands and bowed head, piously crouching beside the others, apparently engaged in earnest prayer. The sight proved too much for my mother's risibilities; she burst into laughter, in which we, at first astonished, speedily joined. Jocko had stolen a soiled nightgown, and made good the opportunity of testifying to his religious desires. This open profession, however, was not followed by suitable deportment, for he daily grew in wickedness. Stealing now became his favorite employment. He occupied a little house erected on a pole in the yard, and, being free as air, was able to follow his thieving unhindered. Eggs and loaf sugar were his special delights. These he would steal before our very eyes, watching his chance to sneak into the store-room, only announcing his presence by a malicious chuckling as he retired with a lump of sugar in each cheek, an egg under one arm, and a saucer under the other. Why he took the saucer, though, we could never imagine, unless it was to break it, which he always did. His favorite resort after committing a theft was the roof of the house, where

he could not be taken. Here he would carry the poor hens and chickens, strip them of their feathers, and throw them half dead, into the yard. Jocko at last became so mischievous and thievish that we were obliged to chain him. But on one sad day he escaped, and was killed by a strange dog that happened by. We heard the poor creature scream and ran to his rescue, but too late; he died before our eyes. We all cried bitterly over his little, black, mangled body, and gave him honorable burial. But we never had another monkey.

Jocko, though not forgotten, was replaced by a parrot that my uncle brought from the East Indies. On his way out, Poll learned to say the Lord's Prayer, but he also learned the use of profane language, and of this we never could cure him. A few special oaths he seemed to consider as necessary accompaniments to his evening devotions. He would perch on the back of a chair, piously holding one absurd claw before his beak and repeat "Our Father," before retiring for the night. But if interrupted during this performance he would swear most horribly, interlarding the clauses of the prayer with maledictions on his tormentors. Sometimes when feeling particularly gay, Poll would stop in the middle of his prayer and introduce a variation by whistling "Old Dan Tucker," affecting also to dance to the measure. I must believe that Polly possessed something more than the instinct usually attributed to animals, for not only did he learn to repeat whatever he heard, but actually adopted the intelligent use of speech himself, often making original observations and replies. His day, however, was short; he was killed by a hawk. Once before his death a hawk chased him into a wood near by, and after searching for him three days we had almost given him up. On the evening of the third day, however, as my mother was

walking in the wood, still hoping and looking, she exclaimed, "My poor Poll! where are you?" A reply came softly *whispered* from a thick bush near by, "Here I am, missis," and in a minute Polly was safe in his "missis's" arms. He had hidden in the bush, and whispered, we supposed, for fear of being heard by the hawk.

We took greater care of our pet after that, but the hawk was destined to have him. One evening mamma took him out on her shoulder for an airing, and poor Polly left his refuge to perch for an instant in a neighboring tree. The instant was enough. A hawk, that had doubtless been hovering near, swooped down, and carried off our pretty Polly. And, after all, nothing in his life became him like the leaving it; his last speech was his cleverest. "Missis," he screamed, as he was carried off, "Missis, the Devil's got me! Oh! the Devil's got me!"

Parrots and monkeys did very well for Bermuda, but when we went to Newfoundland we found that we must adopt hardier pets, so dogs and cats became our specialty.

Fido, our first dog, was a villain. He was a splendid curly black Newfoundland, intelligent, but singularly revengeful. If any one offended him he was sure to inflict a suitable punishment. Ellen, our girl, firmly believed Fido to be "possessed," and well she might. The first time she offended him, he went to her bedroom and deliberately destroyed her best "Sunday go-to-meetin'" bonnet. Ellen locked her room door, and whipped Fido. He immediately repaired to the field where the week's clothes were bleaching, selected *three* of Ellen's garments, and tore them in ribbons, but left everything else untouched. Ellen, after that, was afraid even to speak harshly to him. My sister one day vexed the creature, and, in revenge, he went upstairs while no one was there, selected Sarah's basket of wools,

and a little waxen image that she particularly prized, and "chewed" them up. So constant and certain were his reprisals, that we were unable to punish him for any offence, and so we gave him away.

Dear little Carlo, his successor, was remarkable for nothing but her extreme beauty and docility. She was small, black, and possessed the loveliest coat of silky hair it is possible to imagine. Her large, lustrous eyes were her chief beauty, however, and saved her from the hasty slaps that frequently befall even pet dogs. When spoken harshly to, she would never run or yelp, but just lie down on her back, put up her little paws, and with beseeching eyes beg silently for mercy. It is needless to say that she was almost never touched, or even scolded. A word was enough to punish her sensitive soul. The trouble was, however, that Carlo was altogether too much admired, and was consequently always being stolen. Several times we rescued her, but lost her after having had her for six years. After losing Carlo our affections took a new direction. I picked up a peculiarly ugly yellow kitten which I then considered extremely handsome, and about the same time my little brother found a lame chicken, which in pity he brought home to be nursed.

The chicken and the kitten soon struck up a singular friendship that continued till the cat's death. They were never apart, day nor night. The chicken never went to roost like other hens, but when night came would retire to pussy's nest, and slept with her head on pussy's body, while the cat curled affectionately round her adopted child.

All day long they were together, playing and walking in sweet fellowship. If the chicken strayed away, the cat would seek for her with anxious mewings, and if Pussy wandered off the chicken would run about disconsolately

chirping until answered by a motherly mew. They would run to meet each other in most affectionate haste, and would march off together, Pussy purring with delight. Frequently in the daytime the two would lie down together, the cat purring and licking the chicken as she might have done with her own kittens had she lived to have any. However, she died before she was a year old. The chicken, deprived of her companion and protector, moped for a long time before taking to her natural mode of life.

Carlo the second was a small white and black dog, not particularly pretty, but almost too intelligent; and as for "pluck" there was no beating him. He never hesitated to attack the largest Newfoundland, and was never but once punished for his temerity. The large dogs seemed to respect his impudent ferocity, and invariably patronized him. For a time Carlo had a companion, a huge mongrel, valiant enough in fight, but in complete subjection to the masterful spirit of his smaller friend. He ate just what Carlo left, and would at his bidding drop the choicest bone. This puppyish fear grew, apparently, into a superstition, for Hi always remained Carlo's abject slave and admirer.

Carlo was a victim to ideas. Once thoroughly impressed with an idea, he remained in bondage thereto till the day of his death. On points of instructed duty alone was he incapable of an original and independent thought. The following is an illustration in point. We had trained him to eat his dinner off a certain mat lying before the kitchen door, and we always scolded and slapped him for eating anywhere else. Having once learned his duty in this respect, its performance became a mania with the obedient little fellow. If his bowl was placed anywhere else but on the mat he would caper about it in great distress, sniffing and barking, but refusing to touch the tempting

meal. If, for mischief, we refused to yield to his coaxing, he would lie down beside the bowl, whine mournfully, and roll his eyes at us in a way evidently intended to be at once reproachful and imploring. And there he would lie, hungry and sulky, till his wishes were complied with.

At first we had much trouble with his religious tendencies; he *would* go to church. To stop this, I whipped him and shut him up in a cupboard every Sunday morning. Having done this a few times, I was surprised and delighted one Sunday morning to see Carlo with dejected mien retire to his accustomed cupboard as soon as the bells began to ring. This he continued regularly to do until we left the place, and with it the cupboard. But the seed had been sown, and Carlo remained faithful to his teaching. One Sunday we started early to church before the bells began to ring. At a corner we were joined by two neighbors who were followed by their little dog.

"Oh, dear!" exclaimed Mrs. R—, "what shall I do with Jip? He won't go home."

Superior in Carlo's virtue, we said, "Our dog is so perfectly trained that he never attempts to follow us on Sundays."

Just then, to our dismay and mortification, Carlo joined us, wagging his tail with great *emproisement*. The tables were turned. Mrs. R— laughed at our vain boasting, and I was about turning to take the dog home, when the bells struck up. Carlo stopped as if shot, listened, as if to make sure, and mournfully returned home.

Unlike most dogs, Carlo was very fond of riding—more, we supposed, for the sake of being with my father, to whom he was desperately attached, than from any particular love of the exercise. If he saw preparations for riding going on, he would frequently hide in the sleigh or waggon, not making his presence known until well on

the way. If found and routed out, he would watch the direction taken by the waggon, dash along through by-ways and hedges till well out of town, then make a sudden appearance on the road, making pitiful appeals for compassion on a poor, tired, dusty, affectionate little dog. On these occasions he always got the reward that his sagacity deserved. This intelligent and beloved little creature was poisoned by some malicious person. We nursed him tenderly for a week, but he died at last in great agony.

Jeff, his successor, was simply a fool, a great gawky thing, possessed with the one solitary and inconvenient idea of playing with whoever came to hand, be he grave or gay, old or young. His hospitality was immense. Whoever approached Jeff would seize him by the hand or the clothes and drag him towards the house. The poor fellow, however, seldom received from an indiscriminating public due credit for his urbanity and cheerfulness. His advances were repelled, and he became at last a cynic. While Jeff was yet on the scene, we received a present of a fine Newfoundland female dog, called Topsy. She was very beautiful and intelligent, but we were forced to shoot the poor thing for sheep-stealing. We kept her for two years, however, and in that time she presented us with several nice litters of puppies. The first lot excited Jeff's curiosity very much. He attempted to investigate the matter, but was quickly driven away by the enraged mother. Then what do you think Jeff did? He went up stairs and looked at the puppies to his heart's content through a displaced plank in the upper floor of the shed. His interest and curiosity never abated till Topsy allowed him to assist in the care of her cherished children; there he would lie, watching and listening with awe-struck look for hours. Topsy, herself, soon learned to use the same post of observation. If, while she was

feeding or sunning herself, the puppies yelped obtrusively, Topsy would run to the hole, look earnestly down, and, if all was right, come quietly back to her occupation.

Topsy's son and successor, Neptune, is now prime favorite. He is an immense and handsome dog, amiable, clever and peculiar. Valiant as a lion in fight, he is mortally afraid of a cow; this, I suppose, is his antipathy. If urged to attack one, he will retire yelling at the least shake of her horns. He is very tidy, always wipes his feet

when he enters, and shuts the door.

He will "speak" for something to eat, and on being bidden, will make a most fascinating bow, putting his huge paw to his head with an elegant flourish, and smiling a terrifying smile. On one occasion Nep wandered off for three or four days, and we could hear nothing of him. On Thursday evening, however, he returned, pushed open the door, marched in, mounted a chair, and gravely offered to shake hands all round. This he considers a choice performance. J. X. S.

PUZZLES.

CHARADES.

I.

Thousands and thousands of our race
Beneath my first have groaned ;
An evil thing in tyrant hands,
It must be fairly owned.

My second we may always find,
And seldom need to look ;
Whate'er we lose, we're sure of these—
So says the sacred Book.

My last lies quiet and concealed,
Sometime for many a year ;
'Tis oft perused with heartfelt grief,
With sigh and sob and tear.

My whole, when summer days are gone,
Among the leafless trees
Still chants her melancholy song,
Sad as the wailing breeze.

E. H. N

II.

Repeat a well known quadruped ;
My next you'll find in nation ;
My whole reveals a wicked deed
Of deepest degradation.

GEOGRAPHICAL STORY.

During a month named by a river that empties into the Danube ; dressed in a full suit made of a city in China, which was lined with a town in the north of Hindostan, and wearing shoes made of a country in the north of Africa, having in the soles a city in the south of Ireland ; trimmed with large brass islands in the North Pacific Ocean, and attended by a river that flows into the Uruguay, I said the southern cape of Greenland to my friends—the two capes at the mouth of the Chesapeake bay ; and picking my teeth with a bay north of the peninsula of Alaska, I started to form a town in Stark County, Ohio, with a girl who had refused an offer of marriage from a rude fellow. When I arrived, her mother, being filled with a cape in the north of Scotland, was the capital of Mechlenberg, in Prussia, at two noisy countries separated by the Niger river, in Africa, and a port in China, but who, after all, had a largest fresh water lake daughter. When I met her, I called her islands west of Morocco, and gave her

a cape in the north of Brazil, and a pound of a town north of Florence, in Italy. Then she set before us, on an empire—east of China—dish, a country in Europe, which was very full of a country south of it; and some fish-balls made of a bay in Massachusetts, with a cape south of Ireland, cup of a large Asiatic island coffee, and then retired to milk a town in the Isle of Wight. When I spoke to her about being her island in the Irish Sea, she said I was a group of islands near the Lands End, which was not a cape near Vancouver's Island; so I told her to go to a town in Nova Scotia, put on my bay at the Isthmus of Darien, and went home, feeling worse than I ever did since the day I was a lake in Louisiana.—*Selected.*

 PICTORIAL PUZZLE.


What four celebrated Englishmen are represented in this picture?

—:0:—

ANSWERS TO PUZZLES IN OCTOBER NUMBER.

ENIGMA.—Weasel-easel-sale-lease-sea-awe-ewe-eel-Wales-law.

DIAMOND.

H
 B U D
 C A T E S
 B A N T A M S
 H U T T O N I A N
 D E A N E R Y
 S M I R K
 S A Y
 N

The Home.

WELLS AND CISTERNS AS A SOURCE OF WATER-SUPPLY.

Notwithstanding the achievements of engineering skill, which have supplied to nearly all large cities, and to many small ones, an abundance of water from a distant and selected source, the great majority of the human race (as they always have done, and, in all probability, will continue to do) obtain their water for domestic uses from wells and cisterns.

An aqueduct system of water-supply makes absolutely necessary a system of sewage, on account of the enormous increase of liquid sewage, and can only be adopted with safety in places having a water-front suitable for the discharge of sewers. It seems probable, therefore, that all places, whether large or small, which are not situated on the ocean or on some large river or lake, must continue to look to wells and cisterns for their water-supply. It is my purpose in this paper to enquire into the evils which accompany these sources of supply, and, if possible, point out the remedy.

Until very recently it seems not to have been suspected that wells and cisterns could furnish water deleterious in its effects, except in some very marked cases, and then they were supposed to be poisoned by some enemy. It was not deemed possible that water which bubbled from the earth, or fell from the clouds, could be otherwise than pure. But modern research, which has dispelled so many delusions, and overturned so many idols, has demonstrated that our oldest and most respected source of water-supply has been a very Borgia of destruction, passing the poisoned cup to thousands and millions of unsuspecting lips.

There is to-day no doubt in the

minds of those who have studied the subject, that filth in its various forms, introduced in the system through the lungs, in the shape of sewer-gas or emanations from decaying organic matter, or through the stomach, mingled with drinking-water, is, if not the essential cause, at least an indispensable condition in the development of a large class of diseases.

That wells and cisterns, especially the former, have been in all past time, as they unquestionably are now, the sources of disease, on account of the frequent admixture of some form of sewage with the water which they furnish, is not doubted by any who have kept pace with the progress of sanitary science, or are conversant with the medical literature of the last ten years. I am convinced, moreover, that the chance of the contamination of the water in wells and cisterns is much greater than is even now generally supposed, and that the means usually adopted to prevent the admixture of foreign matter are altogether incompetent to accomplish their object.

Let us first consider the manner in which foreign matter finds its way into wells. A well is too frequently a sort of drain for the ground in its vicinity, or more correctly, it is a receptacle, into which flows the surplus water from a region varying in extent with the depth of the well and the nature of the adjacent soil.

If a quantity of perfectly wet earth be placed in a basket, a portion of the water which it contains (surplus water) will obey the law of gravity and flow away; capillary attraction will cause the retention of the remainder. The facility with which this surplus water

will flow off through a sub-soil drain (see Fig. 1) is familiar to all. The open drain gives at every point on its surface an opportunity for the drops of water lying adjacent to obey the law of gravity and flow off, seeking a lower level; the drops immediately behind these follow closely, on account of the tendency of the first to form a vacuum

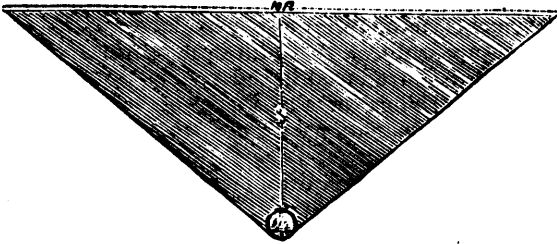


FIG. 1.—SHOWING AREA OF DRAINAGE OF A SINGLE PIPE.

and so on indefinitely. Thus a line of drops, varying in length, is set in motion toward the drain, and in a few hours the soil in its vicinity is freed of its surplus water. Looking upon a well as a kind of perpendicular drain (and under circumstances which frequently exist, it acts as such for the soil in its vicinity), we readily perceive how it may become the receptacle for surplus water, especially when copious rains follow a period of drought; for then the water being low in the well, and the upper stratum of the earth being saturated by a rain-fall, which, though abundant, is not sufficient to affect the remote sources of supply, the surplus water from a great distance passes without obstruction into the well, carrying with it whatever impurities it may have acquired in its passage.

If the soil in the vicinity of a well could be kept perfectly free from foreign matter—if it could be kept clean, little harm would come from this surface water, though it must be remembered that the surface soil is the home of countless insects and small animals, and that it is the universal burying place. This, however, is of small account compared with the danger to wells, which arises from their near proximity to dwelling-houses and the deposits of

waste matter which so universally accompany them. By means of these deposits the soil in the vicinity of wells frequently becomes loaded with filth.

The cess-pool, the privy-vault, the pig-pen, the barn-yard, the place selected for the deposit of laundry and sink water, are frequently grouped about the well and become centres of deposit, in which filth accumulates from year to year, causing the saturation of the soil in constantly increasing areas, so that the neighboring well, which at first may have furnished water which was perfectly pure, in time begins to receive the soakage of these accumulations. Sometimes this soakage into wells does not take place for a

long time, and is then intermittent, depending upon rainfall and other causes. Sometimes an accident like the breaking or obstruction of a drain will cause a well to be flooded with sewage; at other times, owing to the peculiar constitution of the soil and the conformation of the rock, sewage will find its way directly into a well, even though situated at a considerable distance. A case in point occurred under my own observation. The water in a certain well (see Fig. 2) having acquired an unpleasant taste and odor, the owner, supposing that the trouble arose from surface water, had his well taken up down to the rock, and from this point had the wall laid in cement and a coating of hydraulic cement applied to its outer surface. Around this the earth was thoroughly packed. No benefit resulting from this change, the well was again taken up and (the season being favorable) it was sunk to as great a distance as possible into the rock, making its total depth about thirty feet. The well was then walled up in the same manner as before. Water was carried from the bottom of this well into the house through a pipe, and was drawn from the surface with buckets. It was soon noticed that water which was drawn

with the pump was bad, while that drawn with the buckets was apparently good. The cesspool was on the opposite side of the house, about fifty feet north-east from the well, and was excavated nearly to the rock (which is

flow from the laundry and water-closets of a large boarding-house to a cesspool situated at a long distance from the house and well became obstructed at a point about sixty feet from the well, and the ground in the vicinity of the obstruction became saturated with

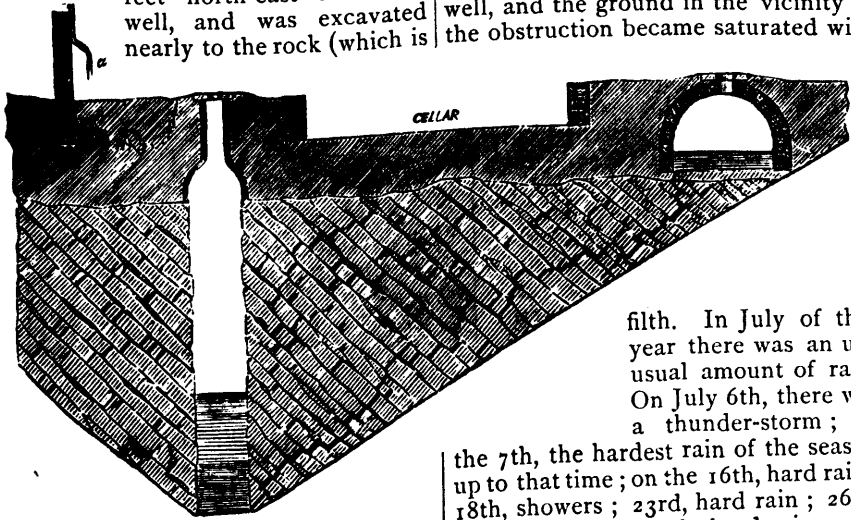


FIG. 2.—SHOWING A WELL CONTAMINATED BY A CESSPOOL FIFTY FEET DISTANT.

a red sandstone with a dip of about 45° to the north-east). At first it seemed impossible that fluids could find their way from this cesspool to the well, but the removal of the former to a distant part of the grounds was followed by the disappearance of all bad odor and taste from the water, forcing us to the conclusion that the contents of the cesspool had found their way along the fracture lines of the red sandstone for a distance of sixty or seventy feet, in sufficient quantity to render extremely unpleasant the water of an abundant and constantly changing well.

An example illustrating the contamination of wells which have done good service for many years occurred in Montclair, N. J., about a year ago.

The pipe which conveyed the over

filth. In July of that year there was an unusual amount of rain. On July 6th, there was a thunder-storm; on the 7th, the hardest rain of the season up to that time; on the 16th, hard rain; 18th, showers; 23rd, hard rain; 26th, showers all day; 28th, hard rain.

During the month of August ten inmates of this house were down with fever—if not typhoid, something closely resembling it—and were severely ill, the majority of them for five or six weeks. Early in August the water from the well was found to have a disagreeable taste, and efforts were made to have its use discontinued. The

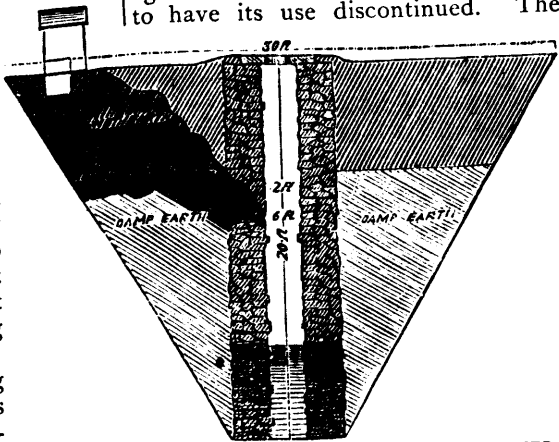


FIG. 3.—A WELL CONSTRUCTED IN THE USUAL MANNER.

advice of the attending physician, however, to have the handle of the pump

removed, was not followed, and it is altogether probable that the water was used to some extent after it was suspected of being impure, especially as no other cause could be discovered to account for the attack of fever, and as the well was situated in the front yard and supplied with a drinking-cup. This water was found to contain twenty-four grains to the gallon of solid organic matter. In this case it seemed certain to the committee appointed by the Sanitary Association to investigate the matter that the frequent rains of July had washed from the saturated ground above-named a large quantity of filth into the well, and that the fever was the result.

An open well, built in the usual manner, with a stone wall backed by two feet or more of loose stones (see Fig. 3) is liable to contamination in another way, viz. : from the decaying bodies of reptiles and small animals which have fallen into it and died there. On this point I have consulted an experienced well-digger of our place who has cleaned hundreds of wells, and he informed me that he usually finds in wells from eight to sixteen inches of offensive mud, in which are imbedded the remains of

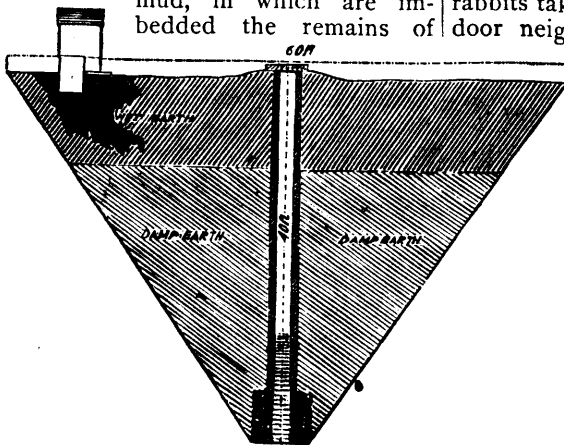


FIG. 4.—A WELL WITH AN IMPERVIOUS WALL.

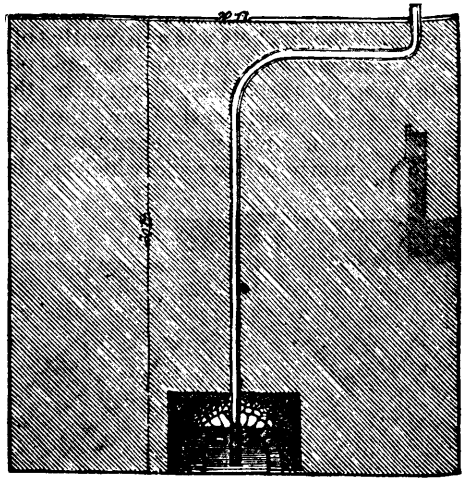


FIG. 5.—A WELL ARCHED OVER TWO FEET FROM THE BOTTOM.

Toads especially seem attracted during the hot, dry days of summer to cool, moist, subterranean places, and sometimes great numbers of them burrow in the loose stones of which wells are constructed, and not infrequently fall into the water and perish. My authority informs me that he has sometimes found nearly a peck of toads in various stages of decay; that he often finds rats, and occasionally cats and dogs. On one occasion I saw three rabbits taken from a well, and my next door neighbor, while seeking for the cause of evident impurity in his drinking-water, has at different times taken from the well two birds—one a robin, and the other what seemed to be a squab. A well may have quite an accumulation of these remains at its bottom, and when the water is abundant it may be affected to a degree inappreciable by the senses, but when the water gets low the matter frequently becomes serious; but so gradually does the unpleasant odor and taste develop in such cases, that disease in the family is frequently the first announcement of impurity in the water.

many small animals, such as toads, frogs, rats, cats, etc.

We now come to the important practical question, how shall a well be constructed so as to avoid or reduce to a minimum the chances of the introduction into it of foreign matter which is detrimental to health?

First, of course, the well must be so constructed that it cannot act as a drain for the neighboring soil. This can be done by making the wall above low-water mark of some material impervious to water, or by omitting this part of the wall altogether. The first can be accomplished by having the wall from a point two or three feet from the bottom made of brick with a coating of hydraulic cement (see Fig. 4) on its exterior, or of hydraulic well-tubing with the joinings well protected with cement; in either case the earth should be thoroughly packed around the wall, and a slight embankment should be made around the orifice to prevent the in-flow of surface or storm water.

In such a well the draining surface is so reduced, and placed at such a distance below the surface of the ground, that in the great majority of instances the introduction of foreign matter becomes impossible, except in so far as there is a chance that substances will fall into the well from above. To prevent this the well should be kept covered when not in use. In most cases, however, it is better to omit the upper part of the wall altogether. (See Fig. 5.) After the excavation is completed, the wall can be built in the usual manner for a distance of two or three feet, more or less, as circumstances may demand; the service pipe can then be placed in position, and the well arched over. The remainder of the excavation can then be filled with earth, well packed as it is thrown in, and the pipe carried to any convenient point. It will be necessary to place above the arch several layers of stones successively smaller to prevent the falling of earth into the space below.

The workmen will probably suggest a layer of turf or straw to accomplish this object, but the presence of either

of these substances will cause the water to be unpleasant for a considerable time, and will prove the cause of much annoyance. There is a prevalent notion that a well should be ventilated for the purpose of allowing noxious gases to escape; and that water is better for being exposed to the air. I hardly need state that the only noxious gases in a well (*i. e.*, gases which render the water unwholesome) are the products of the decomposition of organic matter which has found its way into the well in ways which have been described above, and that water as it flows in its subterranean passages is more perfectly aerated than it can be in any other way.

In the case of a well more than thirty feet deep, it will be necessary, of course, to have the lifting apparatus placed at a point within thirty feet from the bottom, as water cannot be drawn by suction from a much greater depth than this. About two years ago I succeeded in persuading some workmen to construct a well in the manner last described, and in spite of their predictions of failure on account of the impossibility of pumping water from a vacuum, and other causes, it has proved a perfect success. In favorable locations the driven well, as it is called, may be employed, and it fulfils all the necessary conditions.

CISTERNS.

Rain-water, when collected in cisterns, is liable to contamination from the dust which collects on the roofs and in the gutters of houses. This dust, coming as it does from the street, is composed largely of the excreta of horses and other animals, and frequently, especially during a long period of drought, collects in such large quantities that the water containing it is abominably offensive and entirely unfit for use. To prevent this admixture it is necessary to have a shut-off in the leaders communicating with the cistern so constructed that the water can at pleasure be prevented from flowing into the cistern and allowed for a sufficient length of time to wash thoroughly

the roof and gutters, to discharge itself upon the ground, or to flow away through some channel prepared for it.

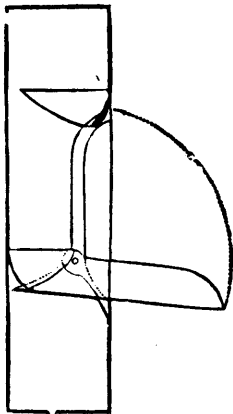


FIG. 6.—SHUT-OFF.

A convenient shut-off which can be made by any tinsmith is represented in Fig. 6.

In addition to this every cistern should be provided with a filter. A brick partition made in a circular form, as represented in Fig. 7, makes a very good filter, as experience has shown. The partition should be carefully built of bricks laid up in cement in such a way that there are no apertures between them, and of course should not be covered with cement. A better filter, however, can be made of charcoal, sand and gravel. The cistern should, as before, be divided by a circular partition, only in this instance

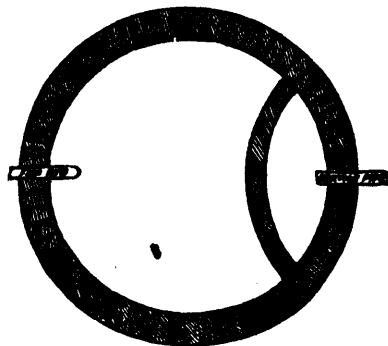


FIG. 7.—TRANSVERSE SECTION OF CISTERN WITH BRICK FILTER.

the convexity should be toward the smaller compartment which contains the filter; and that portion of the partition which is above the filter should be covered on its convex surface with cement. The first layer of bricks should be laid with spaces between them, as represented in Fig. 8. The filter may be made in this way:

Place in the bottom of the smaller compartment a foot or eighteen inches of charcoal, broken to about the size of what is called nut coal. Upon this place a layer of very coarse gravel about six inches deep, then a six-inch layer of ordinary gravel, then six inches of sand, then about a foot of coarse gravel. Water, in passing through a filter made in this way, will be so perfectly freed of impurities that it is suitable for any domestic use. It should be remembered, however, that

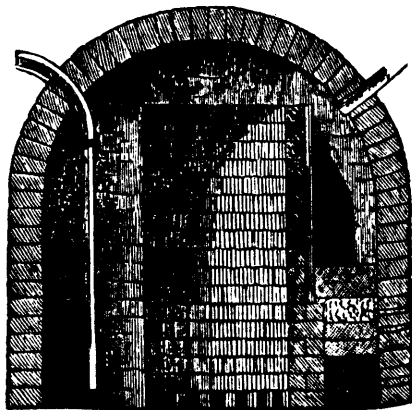


FIG. 8.—VERTICAL SECTION OF CISTERN HAVING FILTER OF CHARCOAL AND GRAVEL.

any filter will in the course of time become clogged with foreign matter, rendering necessary its renewal or cleansing. The sand and gravel can be put in a condition for doing duty a second time by washing, and the charcoal by washing and heating in an oven.

With all the care possible to prevent the introduction of foreign matter, it will be necessary to have a cistern thoroughly cleaned at least once a year. Cistern water frequently becomes saturated with sewer-gas from the cess-

pool or sewer into which the overflow-pipe of the cistern is made to terminate. Water has a great capacity for gases, and is sometimes rendered extremely offensive by the absorption of sewer-gas. I once saw a cistern through whose overflow-pipe not only sewer-gas, but the liquids from the neighboring cesspool, had found their way, rendering the water such that it would hardly have been considered potable even by the defenders of the Passaic and Schuylkill waters.

The remedy for this evil is to have the overflow-pipe terminate at some lower point on the surface of the ground, or in a drain which conveys water only. No amount of care, however, in the construction of wells and cisterns lessens the importance which attaches to the proper disposition of refuse matter, for if it be allowed to accumulate in the soil it will in time find its way into the deepest wells and into the most carefully made cisterns. In some of the older communities, London for example, the ground is so

saturated with filth that the wells contain nothing but what may fairly be called liquid sewage. The emanations from filth-sodden soil poison the air, as the soakage from it poisons the water of our wells.

It is time we had laws to protect us in our rights to pure air and water, and time we had a public opinion as sensitive in regard to these rights as it is to the rights of property. If my neighbor enter my premises and damage my property, or if his cattle enter my premises and damage my property, I have a remedy in the courts of justice, and public opinion sustains the verdict of the courts. But if the filth-accumulations of my neighbor invade my premises, if they pass the boundary line which separates my land from his, and poison my drinking-water, or if their effluvia enter my chamber at night and steal from me my health and vigor, leaving me a wretched invalid, the laws provide no remedy, and public opinion is indifferent to my wrongs.—*Scribner's Monthly*.

MY LADY HELP, AND WHAT SHE TAUGHT ME.

BY MRS. WARREN, AUTHOR OF "HOW I MANAGED MY HOUSE ON £200 A YEAR," ETC.

(From the Ladies' Treasury.)

CHAPTER VI.

To Miss Severn the morning brought with it not only a sense of new duties dependent upon herself for performance, but also, while she was dressing, the question came, Could she persist in this novel and, to her, untried work?

She had an earnest desire to benefit her fellow-creatures. Money she had none, but the good teaching she had received she could impart to others, and therein her "mission" lay.

Presently the bugbear of "caste" rose up before her, and she thought, "Supposing I meet guests here with whom I have been intimate, what then?" It must be confessed that here, as

she afterwards told me, a choking in the throat and a partial revulsion of courage arose. "Can I serve where I have been equal? I am most intensely proud, and am certainly poor—incompatibilities decidedly. Pride is a vice, and poverty a misfortune.

"There is a dignity in skilful labor guided by intelligence; but a sad and depressing annoyance to both mistress and maid arises from mechanical toil which sees not the *why*, which finds no satisfaction in duties properly performed, or, indeed, which knows not how properly to do anything.

"There is mission work enough—in England, at any rate—for thousands of well-trained girls

in household duties, if only they will cast away that troublesome demon, False Pride, *always* setting up an imaginary barrier to sound, wholesome employment. Mission work, by which untaught young servants shall be trained to good habits, and unskilful mistresses may, if they will, receive profitable instruction also. At all events, I will have no false pride in the matter, and none of that of Diogenes, who, when treading on the rich furniture of Plato, said, 'I trample on the pride of Plato.' Plato justly answered, 'But with greater pride.'

This musing was brought to an end by the ringing of a factory bell, betokening that the hour of six had struck. There was more than ordinary fervor in Miss Severn's prayer that morning to be kept from pride and to have protection and help through the day. Then she tapped at Ellen's door, which was near to hers, for, she knew, it is the nature of most young girls to sleep heavily when not subjected to school or business discipline.

Ellen had undoubtedly been untrained to any method in her work, for when Miss Severn came into the kitchen the fire was kindled, and in a few minutes went out. Miss Severn, with kind manner and voice, said, "Let me show you how to kindle a fire. Take out all your coals into the scuttle, brush the soot out of the chimney, and sweep out the grate as gently as possible. Don't make a dust; much noise and much dust made in work show the worker to be unskilful. Now with black-lead brush rub the grate and bars till they shine. At the bottom of the grate put a layer of cinders, then some pieces of small coal, upon that the paper, and then about ten sticks, laid five one way and five across, but not with the end sticking out of the grate—a plan of no use whatever. Now put some small pieces of coal, the size of walnuts, on the top. Then set light to the paper, and in a few minutes, if the sticks are dry, you will have a good fire. When you want to boil only a kettle of water, you must wind the grate close and build the fire to nearly the top of the grate. Then the moment the coals catch fire, the kettle may be placed *over* the top, not on it, and it will quickly boil. But if you want the water in the boiler to boil readily, then the fire must be built low down, and nearly to the breadth of the grate. The quantity of coal burned is, in both ways, much the same. When the fire is burned through to some degree throw on more cinders, and small coal on the top to hide them;

and what you can't use put in the scuttle to be mixed with small coal. Take up the fine ashes, not by scraping them up with the shovel, making a disagreeable noise, but by sweeping them into it, and put them in the dust-bin, on the sifter, that they may be afterwards sifted. Those rocking sifters are capital for preventing dirty work. Now sweep and hearth-stone the hearth, or rub it with the black-lead brush, and scour the fender and sweep the kitchen. You can only slightly do this in the early morning, for just after dinner is the right time to thoroughly clean it. There are now the sitting-rooms to be cleaned and dusted, the stairs and hall to sweep, mats to be shaken, and the outside steps to clean, and you and I have to do it all before nine o'clock; and as Mr. Newton breakfasts at eight, we must get the dining-room finished first. You shall make the fire, and I will sweep the rooms. I am going to sweep and dust the stairs while you make the fire, black-lead the grate, and scour the fire-irons, and what else is needful to be scoured. Let us take up all the brushes and dusters that we need, and your housemaid's box. See that you have in it, all in order, black-lead brushes, and black-lead, brick-dust, grated fine, in an old saucer, some rags for dusting the grate and hearth, and that small round brush I see in the box for dusting the corners. There is your dustpan and mine to take up; your thick cloth for laying down before the fire-place. I see that Mrs. Newton does not at night wrapper the furniture, but as the plan keeps furniture clean for years longer than otherwise, I shall ask her to adopt it.

"I think you are not attending to me, Ellen. Get together each thing as I tell you. You will soon understand better, and what is now difficult to you will by habit become easy. We must manage to collect our tools in the evening instead of the morning."

"Well, Miss Anna, I never did see any one so very particular. Why, we don't have wrappers and such things. The missus might give 'em to you, but she wouldn't to me."

"Because you wouldn't keep them clean. Where is the cloth for laying before the fire-place, that you may not kneel on the carpet, or put your box and brushes on it? Let us see if we can find something; if not we can lay down these old newspapers. They will do for once."

This make-shift succeeded. The carpet, hitherto so ill-used, was now screened from further injury. The dining-room door was shut to

prevent noise, and Ellen was left to her work. When Miss Severn had noiselessly swept the stairs, using a small round brush for the corners, slipping the rods to remove the dirt underneath, and then placing them back with each end exactly at equal distance from the stair-eyes, she found that Ellen had only carelessly accomplished her task, and resolved that she would stand by while the girl was cleaning the other grates, mentally saying that neither once nor twice, nor perhaps twenty times, would suffice to get the girl perfect in her work.

Miss Severn, having covered up the sofa and turned the chairs one seat on the other, now with a long thin American broom began to sweep the carpet *from* the corners into the centre of the room.

"Why, Miss Anna, what are you doing? That's not the way to sweep; you should sweep the dirt out to the door—"

"And into the corners, and out on the mat which lies at the door, where it should not be," replied Miss Severn. "My plan is to sweep out the corners first; the dirt is sure to be taken off the middle of the room, but the corners are difficult to clean after dirt has been swept into them, and, in endeavoring to get it out, the skirting-board is knocked and injured; so that I prefer my simpler and cleaner plan to yours, Ellen. I have no doubt I may learn a good deal from you; but when I show you that my plan is the best, you will, I am sure, adopt it."

"Of course, Miss Anna, it stands to reason that your plan is the best, now you tell me why you do it, but I never saw it done before. I've always seen it brushed into the passage, and taken up when the passage is swept."

"If it be not taken up at once, even in the passage, you know it would be trampled upon and brought into the room again, or be dragged elsewhere. I have seen this done frequently. It was an excellent servant from whom I learned how to sweep a room."

"You now sweep the hall clean. When you come to the first step, don't brush the dirt down the stairs to make other places dirty, but take it up in the dustpan, and be sure with the small brush to clean the corners of the stairs; the baluster brush won't clean them. I will now open the window—after sweeping, mind, not before—and while the dust is settling will see that the kettle is near boiling, and set the breakfast things; and when I have dusted this

room you shall learn to cook the breakfast."

"But I can dust the room—I shall have time," said Ellen.

"Very well, sweep the hall first." This done, Ellen came with her duster, and began first to pull off the wrappers, and in a second to flick, with the straggling duster in her hand, the dust from one place to another. Here Miss Severn entered and asked, "What are the wrappers for, Ellen, if not to screen the furniture from the dust? Then keep them on till the room is dusted. Remove them only when the dust is all taken off and the rug is shaken and laid down. Look here, Ellen, gather up the thickest of the dust in your duster, and shake it out of the window; open only enough for you to put out your hand, otherwise the dust will fly back into the room. When you have done this two or three times you may then dust away without driving the dust to settle in some other place. We will leave the drawing-room till after breakfast, and, when we have dusted the hall and swept the steps, the master's boots have to be cleaned."

"Oh, no, Miss Anna, master don't wear the same boots every day. I don't clean them till by and by."

"Pleasanter for you that this is the case, Ellen. Some gentlemen have their boots cleaned every morning before breakfast; but if you call the boots bright which I saw at the dressing-room door, then Mr. Newton cannot be very particular about the matter."

"I cleaned 'em as I have been showed. I blacked 'em and let 'em dry before I polished 'em. I cleaned 'em as I do the grates."

"Ah! that's wrong: boots must be polished while the blacking is a little wet; grates, when the black-lead is nearly dry; but you will learn to do them well in time. Take up the shaving-water, and knock at Mr. Newton's door; then wash your face and hands, put on a clean apron, come to me, and we will lay the cloth on the table."

"I can do that, if you will let me."

"Very well, when you have done what I have told you, come to me. There is an art in laying the cloth, and I want to make you a perfect little servant, if you won't break down in the teaching."

Ellen rapidly made her appearance, being neither over clean nor neat; but Miss Severn wisely forebore to find fault; she thought it better to be blind to some failings than to be

too exacting—felt it was not judicious to strain the cord too tight. In a moment the girl had dragged the cloth from the sideboard drawer, and had opened it, and was flinging it on the table, causing a great commotion in the air and the cloth to be placed awry.

“Not so, Ellen; let us fold it again, and lay it down properly. Now, then, place half of the cloth on half of the table, have it quite smooth, and lay open the other half over the remaining side of the table. Thus you see you disturb no one, supposing any one to be in the room, and the cloth is at once smooth. After you have practised this a dozen times you will remember. Go down for the tray of breakfast things; the fire is burning brightly, and everything looks comfortable.”

In a few moments Ellen appeared with the tray, and laid the knives and forks on the table in so uneven a fashion, with the handles sticking out over the sides of the table, that whoever passed moved them slanting on it, and this at once gave a disordered and untidy appearance. Miss Severn put the handles even and about an inch from the edge, and called Ellen's attention to the matter. We need not say that such small but by no means trifling matters had to be reiterated daily. However, the hope that “patience brings its perfect work,” consoled for much repetition of instruction.

The breakfast was then proceeded with. The whitening, which had been cleaned and floured the night before, were now dry and needed no egg or bread crumbs. The pan was delicately clean; the bacon was first fried and kept warm. The fat to fry the fish was the same that had been used for the sole, with a small quantity in addition, but there was plenty. When the hissing fat was quite still the fish were put in and allowed to remain till they were brown and stiff enough to lie without breaking across a knife. They were then turned and browned on the other side, and when done they were taken up and drained on paper twice, and on paper they remained till the moment of serving. Two eggs, without the whites, were then beaten with a tablespoonful of milk, a small piece of butter was put into a small clean saucepan, and when it was hot, *not boiled*, the eggs were quickly put in and scrambled about with a fork for two minutes, during which they were not left for a moment. In a plate before the fire was a dainty thin piece of brown toast; in another

plate a few drops of anchovy sauce, with a little butter melted. This was spread on the toast, which was then wetted with a few drops of boiling water, and upon this the scrambled egg was placed. The bacon, each slice cut in two, was placed to surround the eggs, and lastly, at the moment of serving, some sprays of plain parsley were put on the dish, and on the fish were sprays of crimped parsley, not bits, but whole sprays, which had been crisped by putting them on a dry plate in the warm oven. The dry toast was cut thin and without crust, and was of a golden-brown tint, made so by not holding it too near the fire at first, thus drying the moisture out of it, and thus allowing it to become gradually brown, finally standing it upright in the toast-rack, and no slices close together. The coffee was made as on the previous evening.

Mrs. Newton took tea and not coffee, and she did not come down till ten minutes after her husband, which gave Miss Severn the opportunity to make her tea after “the hop-maker's fashion,”—a fashion pronounced by good judges who have lived in Australia to be the way that is adopted in “the bush,” and to be very excellent. She poured some boiling water into the kitchen teapot, made of tin, and caused it to boil in the teapot; while boiling, two teaspoonfuls of tea were put in, and this was allowed to boil for *half a minute*, then was removed to the side of the fire, and covered with a thick cloth, instead of the more appropriate “cosey,” which was not in this house. Then, when Mrs. Newton's footsteps were heard on the stairs, the silver teapot was heated twice with boiling water, then the tea poured in, and the teapot covered with a cloth till it reached the dining-room door, where it was discarded.

Ellen, with clean hands, face, and apron, and with tidy head, took in the breakfast. Mr. Newton looked up quickly as he saw the door open, and although an unusual figure of cleanliness appeared in Ellen, still it was not the face he expected and even desired to see. The arrangement of the food and the excellence of the cooking, if it did not surprise him, set him in good humor; and on kissing his wife as he left for business, he said—

“If the young person downstairs is willing to stay, better, wifey, make it worth her while by offering her liberal terms.” He did not say “wages”; somehow he felt he was being kept in the dark, and wisely preferred not to be en-

lightened ; it would all come round in time, he thought.

As soon as he was gone Mrs. Newton came into the kitchen with pleasant greeting, and found Miss Severn and Ellen sitting at breakfast, the cloth clean, the fire bright, and all the kitchen looking comfortable. "This is pleasant," she said, as Miss Severn offered her own chair. Ellen, too, sprang up at seeing this and offered hers. Mrs. Newton thanked both, but did not sit down. "What have you there looking so tempting?" she asked.

"Only some cold potatoes fried in country fashion. Would you like to taste them?"

"Very much ; but how are they cooked?"

"When boiled potatoes are cold they are put into a very little salted hot dripping ; bacon fat is better than dripping and does not require salt. A very little fat of any kind answers. The potatoes are then chopped fine in the pan, not out of it, are stirred about well to expel the steam, which makes them taste bitter and unpleasant. They are browned without massing them together, and thus a very nice relish to those who like potatoes, and they are very sustaining."

"Why, good gracious ! my servants have hitherto thrown away all cold vegetables as useless. I have seen fine carrots and cauliflowers tossed among the ashes, and I supposed they were not good."

"Carrots will always warm up again if put into boiling water for five minutes ; but I, too, have thrown away carrots as detestable till I learned the proper way to cook them, and now there is nothing more delicious than whole carrots well-boiled, whether for rewarming, or cold for salad, or for garnishing, or for cutting up to put in soup. Cauliflowers, too, will warm or form part of a salad."

"Dear me ! how much I am ignorant of ! However, I did not come here to interrupt your breakfast, but to ask you, Miss Anna, to come with me to the dining-room."

Miss Severn had finished breakfast. Mrs. Newton begged that she would breakfast in the dining-room. "Here is a better breakfast than you have downstairs ; do eat some."

"No—with many thanks. It cannot be. I will have the same meals that Ellen does, and have no wish to show an example of daintiness to her. Neither she nor I can work upon rich food. Now and then for a relish and change I will ask you for two eggs or some bacon. In

my mother's house the servants had one or the other 'once a week, generally on Sundays ; so, if you choose to allow us the same, that will be quite sufficient."

"But how to use up all the remains of cold food without it is used in the kitchen?"

"There need not be so much cooked, and all cold food can be rewarmed without anybody perceiving it is so. For instance, there are those whitening untouched. When quite cold, a little melted butter—not butter sauce—can be poured over them, then put them on a piece of paper on a hot plate in a hot oven, with the oven-door left open. A few moments will warm them through as good as ever, and they will serve again for breakfast ; or the fish can be removed from the bones in tolerably large flakes, some butter sauce be mixed with a little sauce flavoring, and when this mixture boils put in the fish, stir it gently round, let it stand away from the fire for five minutes, serve, and you will find it an excellent relish. The bacon is not all eaten ; that I shall put away to cut up in small pieces for a rabbit or veal pie. Bacon is not so good warmed twice. Uncooked bacon, intended for flavoring, should not be used in a pie."

"You have certainly disposed of the remains of this breakfast in a marvellous way. I had better give you the keys to manage house-keeping matters yourself."

"Oh, no, I cannot take them ! You must be kind enough to give out the stores and give all orders as usual. I may not be always with you, for, however settled and happy one might feel, circumstances govern us all ; so please keep the keys, and I will come to you for all that is needed."

"But only think, Miss Severn, how much trouble it will save me. I shall feel so free when you are here,—so certain that nothing will be wasted or made away with, that I am sure you will oblige me in this small matter."

"No, dear lady, I cannot. You must keep the keys, and daily habit will by-and-by be anything but troublesome. These house-keeping matters are very easy if ruled by method. It is miserable, I grant, for any lady to be giving out stores at all times. At one certain hour of the day, according to the habits of the family, the materials for cookery, also candles, soap, oil—whatever, indeed, is kept under lock—should be weighed, and given out by the mistress to the cook, and at no other time ; and

a certain quantity of soap and candles twice a week ; for plenty with most servants induces carelessness and wastefulness. They are unable, from their early training, to at once fall into thrifty ways. I have found it so in my mother's family."

During this conversation Miss Severn was collecting the breakfast things and packed them carefully on the tray, not as though they had tumbled together. Mrs. Newton remarked this, and learned a lesson by it. "You are very neat and orderly, Miss Severn, even in this small matter."

"Even this is no trifle, for, if the china is recklessly placed, there is a chance of its being broken, and that would not be a small matter. At all events, in small things as well as in great, the first careful trouble taken is generally the least, though servants won't learn this, neither will children. I know a house where, instead of illuminated texts, sentences are printed and hung up in the kitchen and in the servants' bedrooms, such as 'Waste not, want not ;' 'A place for everything, and everything in its place ;' 'Early to bed and early to rise, makes a man healthy, wealthy, and wise.' The servants understood nothing of this, did not recognize the meanings at all. The first should have been worded,—

" 'If you waste small things you will live to want them.'

" 'Find a place for each thing, and keep it in its place.'

" 'If you go early to bed you will be able to rise early.'

" 'The more trouble you take to get your work well done, the quicker it will be done.'

" 'Work once well done, is better than twenty times badly done.'

"I think great good may be done by hanging these in the kitchen, but I fear that Ellen, for want of supervision, may be making extra work for me, and there are the bedrooms to see to."

"Oh !" said Mrs. Newton, "if you do not mind having me I shall be glad to make the beds, with your assistance, and help all I can till two o'clock, when visitors may call. I do not dine till my husband returns, at six, but will take my lunch when you have your dinner, at one. We shall have some salmon cutlets, and a shoulder of lamb, potatoes, and young carrots, at six o'clock. Will you order of the butcher what you like ?"

"If you will not consume the whole of the

shoulder, there will be plenty of meat that can be cut from the under side which will quite suffice for the three, if the shoulder is not less than four pounds in weight. And the pastry ?"

"Anything you like, so that one is a milk pudding. You will oblige me in choosing this, I know ; only I should say that Mr. Newton detests cold meat, unless with fish and salad ; and he does not like the same kind of milk pudding every day, nor care much for pastry, for in this art my cooks never excelled, no matter what wages I paid them."

"Cookery," said Miss Severn, "which of course includes the making of pastry, is a science, and, unless the true principle of cooking food is understood, the workers will always be in a fog, and confusion the result. The rule of thumb, which some cooks pride themselves upon, is of little use. The difficulty of teaching young girls to cook well is that their brains are untried, their intellectual faculties unawakened, and their experience is *nil*. They cannot reckon time by minutes, nor do they know any thing practical of weights and measures ; and this ignorance stands in their way. Once they can master the weights, measures, and time, the rest is soon taught, if only the pupil have a memory. In schools they are rarely taught to exercise the memory further than repeating their lessons like a parrot."

"Over and over again must truths, whether simple or complex, be reiterated. My father used to say that nothing would teach young people to sooner think seriously than the science of chemistry, because, in studying this, and in experiments, the student was perpetually asking why.

"However, if I linger here much longer my work will not progress, and downstairs the willing heart, but unthinking brain, will be in mischief."

CHAPTER VII.

The bedrooms had to be set in order, even before the breakfast things were washed, Miss Severn having an objection to bedrooms being left till the middle of the day, or even till ten o'clock, if the customs of the household did not prevent this early attention to these matters. But if late rising was customary, then this state of things had to be met in the best possible

way. The windows were now thrown open, the clothes stripped from the beds, and then the toilet service was put in order, all but the jugs and bottles filled, which were left to the last.

"For why?" asked Ellen. "I think they ought to be filled at once."

"And so catch the dust arising from making the beds and the flue from sweeping the rooms. You are a clever girl, Ellen."

Ellen stood with open mouth, taking in a new light which dawned upon her.

Miss Severn's plan in making the beds was to get the lumps out of the feathers rather than to shake the lumps from side to side and so increase their size. This was also a new idea to the girl, when, instead of shaking, she was made to take the lumps in her hands and so pick them apart under the ticking, and then to shake the feathers into place. The blankets also were a trouble to her. Miss Severn would have the end of each that was oversewed with scarlet wool placed at the top of the bed—and always this; not once only, but it was her settled way—and the blankets and sheets well tucked in at the bottom of the bed, each singly, so that a restless sleeper could not without difficulty get the whole of the clothes untucked. The ends of the counterpane at the bottom of the bed were folded underneath, cornerways, instead of projecting in a pucker, for the clothes of every passer-by to touch. Then the valance round the bed, the curtains at the sides, and the sides of the counterpanes were folded back to the top of the bed, and a clean old sheet as wrapper was thrown over. Wrappers were thrown over the toilet stand and table, to keep the articles from being more dusty. The dresses which were hung in the room were also wrapped round, and the work of sweeping commenced. No tea-leaves were used, for upon a good carpet and with a careless servant indelible stains are often made.

Each room was arranged and swept in a similar way, and by the time the last was finished the first was ready for dusting, which was proceeded with as the drawing and dining rooms had been in the morning; not the dust flicked from one place to another, but taken up in the duster, and the latter shaken out of the window. Then the wrappers were taken off, and the articles they had covered were cleansed; lastly, the bed-wrapper was removed, but not the valances turned down. The uncarpeted

boards under the bed were scrubbed with salt and water, which prevented insects from harboring in the floor.

This last proceeding was a matter of surprise for Ellen.

"I never did hear tell of such a thing. There is nothing in the boards or bedsteads that I ever saw."

"And yet there may be in both, Ellen; and, if not, prevention is needful. Some visitors may sleep in either room, and bring the pests in their luggage. Then, you see, the insects will not like their salt reception, for this is an infallible remedy, and when the salt touches them they die. Only for bedsteads it is necessary to take them to pieces, and every crevice to be washed with strong brine; it neither hurts the polish nor warps the wood. The brine will crystallize, and must not be taken out of the crevices; but after the bedstead is put together, it may be wiped off the polish. But remember, if the smallest portion of the wood be left untouched by the strong brine, the mischief remains."

"But, Miss Anna, people have iron bedsteads now."

"Iron will not prevent these troublesome pests from harboring there, neither will what are termed brass bedsteads, unless they were made wholly of polished brass; there would be then no foothold for them. But in both iron and brass bedsteads, the latter having so much iron in them, I once saw these insects in numbers. These bedsteads were bought at a sale, and as the people could not afford to lose the money they had cost, they were taken into the garden, and were, before they were put together, well washed in salt and water, and left so for two hours. Then the salt was washed off, the bedsteads dried, and then had two coats of paint. Never after this was there any trouble with them, only the precaution taken to paint the bedsteads every two years. This is a fact, I assure you, Ellen, though you look so astonished. Another thing, a room is much healthier, much more fragrant, when it has been washed with salt and water; and I believe that even with an invalid in the bed the boards may be thus washed and no cold be taken, provided the door or window be left open, but of course the patient shielded from draught."

The room finished and the stairs swept, the rods being slipped aside, the dust swept from

under, and the rods replaced with both ends exactly even, and finally dusted, dinner had to be arranged and cooked, and while the potatoes were being peeled, under Miss Severn's watchfulness, she washed up the break fast things in precisely the same manner at she had shown Ellen the previous night. There was no haste, no flurry; but the china was washed in hot water and soda, each cup and saucer singly, and then placed in plenty of cold water and drained. Thus in ten minutes the whole thing was accomplished and out of the way. The cups, turned upside down, were drained only and not wiped, and with less danger of snapping the handles.

Ellen, meantime, had the potatoes unwashed in a pan of water, and in this water she commenced to peel them, to Miss Severn's astonishment.

"What are you about, Ellen? Wash the potatoes quickly with your hands in warm water, the dirt will readily come off; if not, use a brush, then take two pans of water, and as

you peel a potato, let the rinds drop into a plate, pick out the eyes, dip it in one pan of water to take off any stain, and then throw it into the second pan."

"But why can't I peel them, and throw them all into one pan and then into the other?" asked Ellen.

"Because they would become stained, and this is how potatoes come a bad color to table and taste earthy. See how the two potatoes you have peeled have stained the water. Would you like to dip a clean piece of lace into that water?"

"No, that I shouldn't. Of course not. Why, 'twould turn brown."

"And for the same reason the potatoes would be brown. Remember this—if potatoes look dark when they are served, the cook is in fault; and if, by bad management in steaming them, the smoke gets under the steamer, the cook has only to pour boiling water over them to wash it off, and the potatoes are none the worse."

(To be continued.)



Literary Notices.

PROFESSOR HUXLEY IN NEW YORK.
Paper by Principal Dawson, LL.D.,
F.R.S., in *International Review*
for January-February, 1877.

As we give this month a paper on Evolution, in the body of the magazine, which states the case from the standpoint of one who is, apparently, a believer in the theory, we think it well to give, at the same time, an extract from Dr. Dawson's paper, in which he criticises the lectures Professor Huxley delivered, a year ago, in New York. This paper deserves to be carefully read, as it takes up the most important points at issue.

In the opening of the second lecture the auditors are complimented on their intelligence in being able to reject not only the absurd hypothesis of an eternal succession, but also that of creation, whether stated by John Milton, or advanced by any higher authority. They are now prepared to enter on the consideration of the only remaining hypothesis—that of evolution. It would seem in the circumstances to be superfluous to adduce any evidence of a theory thus shown to be the only possible one; but in deference to our weakness of faith, the lecturer condescends to devote two of the lectures to the apparently unnecessary task of developing its evidence. If we are to credit the reporter, he arranges this evidence in a somewhat novel manner—namely, as, first, “indifferent;” secondly, “favorable;” and, thirdly, “demonstrative.” One is at first sight disposed to pass over the two first kinds of evidence, as on a par with that of the attorney who, after giving a variety of reasons for the non-attendance of a witness, finally affirmed that he was dead. But on examining them minutely, we find a substantial reason for their appearance—namely, that they are really formidable objections to evolution, disguised as witnesses in its favor, in order that in this capacity they may be examined *pro forma*, and dismissed as untrustworthy.

The first is the remarkable fact, almost incredible in its vastness and inscrutable in its import, that certain forms of life have continued to propagate themselves unchanged throughout nearly the whole lapse of geological time, and have survived changes of physical conditions so

complete that one can scarcely imagine how any creatures could endure them. That land snails still live that lived before Niagara began to cut its channel is a small matter. Marine creatures survive that flourished in Cretaceous seas, which flowed hundreds of fathoms deep, not only over the spots where the great capitals of Europe now stand, but over Alpine summits and Himalayan table-lands. Land plants continue unchanged through all the mutations that have occurred since the Eocene Tertiary began. Nay, more, certain humble types of life seem to have continued without very material change since the Primordial age itself. Through countless generations, and through periods in which whole continents were carried away and rebuilt, these creatures have apparently continued to propagate themselves, without material improvement or deterioration. Still farther, when we trace these plants and animals back to their origin so far as known to us, we see no indication of their having been derived from any preceding species. They came in just as they continue to this day. Are these exceptional cases? In one sense they are; for it can be shown that many species, once their contemporaries, have died out and disappeared, leaving these long-lived species and genera to come down like octogenarians, outliving their generation, into a new and different condition of things. But otherwise they are not exceptional, and new discoveries may enable us to trace other forms of life farther back than we now know them. All this the lecturer admits, and admirably illustrates; but how is it to be harmonized with evolution? In a very simple way. The geological record is so imperfect that the apparently abrupt introduction of these types may merely arise from the accident that their ancestors happen to be unknown to us. Admitting the possibility of this, it removes only half of the difficulty; for it does not explain why, after we have traced species back for vast periods of time, and over every possible kind of physical revolution, they should at some antecedent period begin to change if we could only trace them farther. Reasonable men do not usually hold that by tracing two parallel lines sufficiently far we should at last find them to meet in a point; but evolutionists seem to believe that this is in the highest degree probable, and would be found to be the case but for the inconvenient tendency of such lines to end abruptly. This plea of the “imperfection of the record,” so often put in by evolutionists, is, however, one that has a double bearing; for if further information might enable us to approximate some of our parallel lines of unchanged

species, it is equally possible that it might enable us to trace them farther back, without such approximation, or to trace back other series not now known to extend so far. To class such facts as these as "negative or indifferent evidence," and to say that they constitute "no obstacle in the way of our belief of the doctrine," is certainly drawing largely on our credulity. We may add that the history of the life in former geological periods furnishes other lines of evidence of this somewhat damaging character, well known to naturalists and geologists, but to which the lecturer had not time to advert.

The second kind of evidence, that which is "favorable," but not conclusive, is derived from the fact that existing animals and plants do not, as would seem probable on the theory of evolution, constitute continuous series passing into each other, but resolve themselves into groups separated by intervals more or less wide, and which can not be bridged over. This apparent difficulty is, however, met by the consideration that when we go back into geological time, and take in the fossil animals and plants, these gaps are to a great extent filled up, and the system of nature becomes much more complete—wonderfully so, indeed, when the much-lamented imperfection of the record is considered. In truth, palæontologists have good reason to congratulate themselves that the number of gaps now remaining is so small, and to suggest, though with becoming diffidence and humility, that their record may not be quite so imperfect as generally supposed. As examples, we are referred in these lectures to the wonderful filling up of the group of ungulates by the discoveries of Cuvier and others in the Paris Tertiaries, and the bridging over of the interval between birds and reptiles by the toothed birds of the Cretaceous and Eocene, and by the remarkable Dinosaurs of the Mesozoic age. The lecturer holds that these facts are so far favorable to evolution that they show at least that it may possibly have taken place, and that they might be expected to occur if that hypothesis were correct. He admits that they are not conclusive, for a very substantial reason—namely, that the series afforded by these discoveries is not one consecutive in time. The creatures which should have been the ancestors of others occur at the same time with them, or, perhaps, in formations very much older or newer, and hence the evidence fails to prove genealogical descent. This would truly seem to be a fatal defect; but that it is so becomes even more obvious when we consider that in the present world we have all grades of animals from men to monads, and of plants from the most complex exogens to algae of a single cell. Consequently if the fossil species belong to the same system of nature, they must of necessity come in as intermediate forms, and fill up the vacant spaces. Further, if we find these connecting links scattered widely apart in space and time, or existing together when, according to the theory, they should have been consecutive, the inference is that our theory must be wrong or defective. The conclusion may rather be that they form parts of a great

plan pervading the whole earth and its whole history, and whose separate portions may be related by some higher law than that of mere descent with modification.

But we now come to the "demonstrative" evidence which is to set all our doubts at rest. This consists in the discovery in successive formations of series of species, so related to each other structurally that it may be inferred that they constitute a regular genealogical succession. The hearers of the lectures might, however, at this point, suspect that, inasmuch as so many extinct species come under the previous heads of imperfect evidence, few may be left for this final and conclusive one. Care is therefore taken to inform them that there are many such cases, and that their number has recently been accumulating rapidly. But one only of these is dwelt upon, that of the genealogy of the horse; and it is worthy of remark that this is the illustration which has for some years been paraded on both sides of the Atlantic as the one great conclusive evidence of evolution derivable from fossils. It is given with more than usual completeness in these lectures, and, as it is made the crucial test of the hypothesis, it deserves our careful consideration.

The facts we may take as stated by the lecturer, and may, as illustrative of their nature, confine ourselves to the American examples furnished by Prof. Marsh from the Tertiaries of the West. No species of American horse existed at the time of the discovery of this continent. Our present American horses are, therefore, not actual descendants of the original American stock, but of another series which was developed in Europe, while the horses of this continent had become altogether extinct, though the conditions were quite favorable to the European horse when introduced by man. The lecturer does not remark on the curious significance of this fact in relation to the validity of his demonstration, but it suggests some grave doubts to which we may refer in the sequel. We find, however, in the more recent deposits of America, probably more than one species of horse closely allied to that of the eastern continent. In deposits a little older, those of Pliocene age, are found the remains of *Pliohippus*, an animal closely resembling the modern horse, but presenting some deviations. Limiting ourselves to the forefoot, the *Pliohippus* walked upon one toe, like the horse, but the two splint bones which answer to two other toes are better developed. Next in order of seniority, we have the *Protohippus*, in which the splint bones become veritable toes, though still comparatively small. In the next older Tertiary period, the Miocene, the series is continued by *Miohippus* and *Mesohippus*, in which the side toes approach to equality with the central one, and a rudiment of a fourth is developed. Lastly, in the *Orohippus*, of the Eocene or the oldest Tertiary, there are three well-developed toes and a small fourth one, and the hind foot has also three toes. Similar gradations appear in other parts of the structure, notably in the teeth.

Thus, from three-toed Eocene *Orohippus* by

regular geological and genealogical descent, came a one-toed modern horse, which seems, however, to have reached the utmost possible limit of the development, for we can not imagine it learning to walk on less than one toe. Perhaps, indeed, this may account for the otherwise inexplicable extinction of the ancient American breed. These creatures, in pushing their development still farther, may have lost the remaining toe, and so have been left literally without a leg to stand on.

Here, then, is the final Q. E. D. of evolution, the demonstration on which great biologists can securely rest their belief in the doctrine that the world and all its inhabitants were evolved by the insensate operation of physical laws, and can defy the stupidly imperfect record of the palæontologists. Shall we here abandon our skepticism, and humbly profess ourselves as believers? Unfortunately there are two serious stumbling-blocks which must still be removed out of our way. One is, that while the evidence of succession in time is good, that of genetic connection is not. The members of the alleged genealogical series are still separated from each other by important structural and other differences, and by vast intervals of geological time. The same kind of argument would prove that the modern dray-horses of New York are actual descendants of those whose bones lie in Prof. Marsh's cabinet. But we know that they are not, but came over with the Pilgrims or in later importations, and are as little descendants of their American predecessors as the New Yorkers are of the Mohicans. How do we know that some similar flaw does not vitiate the earlier stages of the pedigree? Another difficulty consists in that same unfortunate imperfection of the geological record which is so often alleged in extenuation of the shortcomings of evolution itself. If Prof. Marsh should in his next expedition to the West, discover the bones of a true horse with one toe on each foot, in the Miocene or Eocene, the whole demonstration would be overset. It would then become probable that in the true line of descent the animal had, after all, remained unchanged, and that Mesohippus and the rest are merely false pretenders to the honor of his parentage. Who shall say that this is impossible or even improbable? The horse is, by virtue of his remarkably specialized foot, adapted for rapid locomotion on dry, grassy plains; but the foot of Orohippus was better suited for supporting its comparatively small weight on soft and swampy ground. Now, as the known animals of the Eocene are mostly those which frequented the oozy borders of lakes, we could scarcely expect an animal like the horse to be found in such company. If there were, as we can not doubt there were, dry plains in the Eocene age, there may have been abundant wild horses pasturing thereon, and we may not yet have met with their remains, so much less likely for many reasons to be preserved than those of their marsh-living contemporaries. Should some intrepid explorer in the far West find such a precious relic, and, escaping the Indian scalping-knife, bring it out to civilization,

it is to be hoped he will not meet with the skepticism and distrust which have often rewarded the discoverers of facts unwelcome to the framers of hypotheses, and that all good uniformitarian geologists, at least, will welcome the new and important fact.

These considerations might induce us at least to suspend our judgment, more especially in view of the momentous consequences to our beliefs in other respects flowing from our adhesion to evolution; but there is a farther objection, honestly referred to by the lecturer himself, and which unfortunately reduces his demonstration to the precise level of the arguments already characterized by himself as "negative or indifferent." It is thus stated in the third lecture:

"The knowledge we now possess justifies us completely in the anticipation that when the still lower Eocene deposits and those which belong to the Cretaceous epoch have yielded up their remains of equine animals, we shall find first an equine creature with four toes in front and a rudiment of the thumb. Then probably a rudiment of the fifth toe will be gradually supplied, until we come to the five-toed animals, in which most assuredly the whole series took its origin."

There are even in this short and very unobtrusive statement of a disagreeable fact some things liable to objection. It might be asked, for example, Why, if Orohippus could, with three or four toes, walk over quagmires, there is any need to suppose that for the mere sake of uniformity it should have had five toes in a preceding period? But such questions do not constitute the real objection to the statement. It requires us to believe in a stupendous and incredible hiatus in our geological record. Not only have no equine animals been found in any formation older than the Eocene, but none of the other placental mammals, their contemporaries, have left any known remains in these older formations either in the Eastern or Western continent. Still farther, in the Cretaceous and immediately preceding periods, the place of these animals in nature was filled by the herbivorous Dinosaurs, which, according to Huxley, constitute a transition from reptiles to birds and not to horses. We are thus required to believe that the five-toed ancestor of Orohippus lived farther back in geological time, not only than any known placental mammal, but than any creature likely to have been the ancestor of such a mammal. In short, the imaginary pedigree of the horse has precisely the same flaw with that of man himself, with that of the Eocene placentals, with that of the Mesozoic marsupials, with that of the reptiles of the same period, and with that of the batrachians of the Coal, the fishes of the Devonian and Upper Silurian, and the Trilobites of the Primordial. All these, as well as the greater and lesser groups of the vegetable kingdom, when traced back, end, like the series of horses, without any apparent ancestors. This is indeed so great and dominant a fact in palæontology that it is hopeless now to explain it by any imperfections of the record, and it unquestionably points to some abrupt mode of introduction of organic types unknown to the received theories of evolution. Thus, after following,

with faith and hope, the apparently triumphant course of the demonstration in the third lecture, in the end we only run our heads against an impassable wall.

Is this, then, the most conclusive kind of demonstration which one of the most accomplished biologists of our time can offer for the hypothesis of evolution? It would seem so; but it is only fair to say that in selecting the historical or palæontological argument for evolution, the lecturer adopted the most difficult line of proof. The showy analogies of Spencer and Darwin, though equally failing as demonstrations, have a much more specious appearance. But there lies behind all this a consideration more potent than any argument, and which probably weighs with many of the converts of this new philosophy more than all facts and reasonings. It is expressed in the following sentences of the report:

"The only way of escape, if it be a way of escape, from the conclusions which I have just indicated, is the supposition that all those different forms have been created separately at separate epochs of time, and I repeat, as I said before, that of such a hypothesis as this there neither is nor can be any scientific evidence, and assuredly, so far as I know, there is none which is supported or pretends to be supported by evidence or authority of any other kind. I can but think that the time will come when such suggestions as these, such obvious attempts to escape the force of demonstration, will be put upon the same footing as the supposition by some writers, who are, I believe, not completely extinct at present, that fossils are not real existences, are no indications of the existence of the animals to which they seem to belong; but that they are either sports of nature or special creations, intended—as I heard suggested the other day—to test our faith. In fact, the whole evidence is in favor of evolution, and there is none against it. And I say that, although perfectly well aware of the seeming difficulties which have been adduced from what appears to the uninformed to be a scientific foundation."

This is the real difficulty. Without evolution, or some similar hypothesis, there will remain in nature, and especially with reference to the origin of species, a residuum of facts unexplained, and apparently inexplicable by science. This can not be endured in an age which has learned to believe that it can explain every thing. In default of actual knowledge, it is necessary by some sweeping hypothesis to cover up our ignorance. The whole march of science is strewn with the wrecks of such hypotheses, devised in every age by ingenious men, to serve as a substitute for actual knowledge, and to spare themselves the labor of arduous investigation; satisfying one generation with a comfortable form of words, only to be cast off by the next.

Evolution will have its day, and then men will wonder how they could have believed it. When it shall be discovered, as assuredly it will, that the world involves causes and agencies vastly more complex than this simple theory suggests, our successors in the arena of science will point to it as a warning against the prevailing error of specialists and enthusiasts, who ever tend, like quacks in medicine, to refer all effects to the same cause, and to cure all evils by one specific. Our time is too much one of rash and daring speculation, as distinguished from the slow and laborious search for truth. But when the reaction comes, the scientific men of the future, as they slowly dig the trenches with which they hope to gain the citadel of truth, will not refuse to give due credit to the bold adventurers who in vain attempted to storm it with a rush. Nor will they fail to admit that they did good service in cutting down many of the old prejudices and false impressions that have blocked the path of the free investigation of nature.



LITERARY NOTES.

POPE PIUS IX has nearly completed his sermons. They are not to be published until ten years after his death. Father Dresciani, a very learned Jesuit, is the only assistant in the work.

THE LARGEST CHEQUE ever drawn on authors' account was one for £20,000, given by Longman & Co. to Lord Macaulay for copyright on the History of England.

THE GHASTLY FAILURES of so many American life insurance companies have led Mr. Elorne Wright, an ex-inspector, to publish a searching book on the subject with the startling title of "Traps baited with Orphan."

MR. PARKER, formerly publisher at Oxford, still continues his researches at Rome. Part 8. "The Aqueducts," and part II., "The Mosaics," have just appeared. Mr. Parker has an enthusiasm for Roman excavations, which is very unusual at his advanced age, and it is indeed admirable in every way. The earnestness and ability of his researches must fill the later years of his life with a rare pleasure. He publishes the result of his explorations in parts, each part being complete in itself, so that if death should stop his efforts, his labors will not have been fruitless to the world.

THE NEW VOLUME of Truboir's Philosophical Library is Edith Simeux's "Natural Law—an Essay in Ethics," a very deep subject, and one requiring much courage to attack. The object of the book is to show that law and morality do not depend upon authority, and that religion does not depend upon revelation, but that they are founded upon the nature or constitution of humanity in general. Every rational being which follows out the free development of its own nature is following the laws of morality. The book is a very suggestive one, and quite unorthodox enough to be popular.

"THAT HUSBAND OF MINE," has been the most successful story published since "Helen's Babies." The usual crop of weak imitations has followed. We have "That Wife of Mine," "That Girl of Mine," and "That Lover of Mine." "My Mother-in-Law," which a clever story, is already followed by My

Grandmothers," and no doubt "My Nephews and My Nieces" will follow. This mean eruption of parasites shows how much of unmitigated "shop" there is in literature to produce such a crop of "pot-boilers" in so short a time after the happy invention of a new and striking title.

THE SEPTEMBER NUMBER of the *Nineteenth Century* commences another "Modern Symposium," the subject being "The Soul and Future Life," and the speakers, Mr. R. H. Hutton, Prof. Huxley, Lord Blatchford and the Hon. Roden Noel. They all speak from their different standpoint in answer to Mr. Frederic Harrison, who in the June and July numbers of the same periodical denied the existence of any conscious life after death, and yet scorned the company of those whom he called Materialists.

MR. GRAHAM BELL'S TELEPHONE, which many consider to be of little practical importance, was made the subject of many experiments at Plymouth during the recent meeting of the British Association. The conclusion arrived at was that the Telephone is one of the most important inventions of the age, and will likely modify our present telegraph system very seriously.

SERGIUS KERN, a chemist of St. Petersburg, in working upon some platinum ores, has discovered a new metal which he calls Davyium, in memory of Sir Humphrey Davy. It is a hard, silvery metal, very infusible, and somewhat ductile.

SIR WILLIAM THOMSON still clings to his theory, put forth when President of the British Association, that life on this planet was originated by germs brought by meteorites from some previously wrecked world. He lives in hope of actually seeing a plant of meteoric origin. This is an odd way of diminishing the difficulty attendant upon the scientific conception of the origin of life.

DR. COXES, the Bodleian librarian, at Oxford, has refused to lend "The Priest in Absolution," even to a Bachelor of Arts of the University.

His course is generally upheld by the public, who think that a great library does not exist for the purpose of circulating improper books.

MR. SAMUEL BUTLER, author of "Erewhon," who resided in Montreal for some months in 1875, is preparing a new work on "Hereditary Instinct."

M. HOVELACQUE'S work on the Science of Language has been translated for the Library of Contemporary Science. The "missing link" is evolved from the scientific imagination, under the title of "the precursor of man." Some precursors developed the left side of their brains, and spoke, and so became men—our ancestors. Others would not "evolve," and, "therefore," retrograded, and became the ancestors of the anthropoid apes, who still labor under the disadvantage of *aphasia*.

PROFESSOR WEISE'S German letters on English education have been translated and published in England. They contain valuable criticism, as well as generous appreciation of English methods. Having filled the office of Minister of Instruction, his remarks have great weight. The English mania for examinations is commented on, and he makes the almost incredible assertion that, in one school visited, there were forty-four examinations for the highest class between the 17th of June and the 22nd of July.

M. THIERS has left to the State all his papers and the historical materials with which he wrote his great works on modern French history.

VOLUME I. of Professor Friedrich's long-expected work on the Vatican Council has appeared at Bonn. It is in truth an exhaustive history of Ultramontanism.

THE SAVANS of the British Association do not feel alarmed at the approach of the potato bug. Mr. R. McLachlan read a paper upon it, in which he doubts whether the insect can be acclimatised in Great Britain. We have never supposed that the climate of Great Britain was much to boast of, but if it kills potato bugs we bless our forefathers for emigrating.

ARCHÆOLOGY WILL be enriched this fall with some very important publications. First of all will be Dr. Schliemann's "Discoveries on the Site of Ancient Mycenæ"; next comes General Cesnola's book on Cyprus; then a new and revised edition of Sir Gardiner Wilkinson's "Ancient Egypt," and lastly a new edition of Dennis' "Cities and Cemeteries of Etruria."

HENRY ROGERS, author of "The Eclipse of Faith," is dead. He wrote also a review article "Reason and Faith," which made a sensation at the time of publication. As a controversialist he was a hard hitter, and sometimes scarcely a fair one.

THE MEETING of the British Association at Plymouth this year was decidedly dull. There is nothing left now to be exploded, and scientific meetings are getting dreary. All the fireworks were set off by Huxley and Tyndall.

PROF. HAUGHTON read an interesting paper at the Association, on the "best possible number of limbs for animals." It was demonstrated that there was no advantage in having more than four limbs. Feeding an extra limb would be a serious undertaking. Man lost a little in steadiness by not planting himself on his four limbs, but then his hands wielded by reason were a great gain. It was scarcely worth while to go to Plymouth to learn that. One can't help regretting the tail though; it would not have cost much to feed, and it would have been so ornamental as well as useful to fasten on to things with and steady oneself, when the hands were at work, and then the gentler sex would have had something more substantial to decorate and switch about.

THE MATHEMATICANS of the British Association are much exercised just now upon the "wobbling" of the earth's axis, which took place when the present continents were thrown up from the sea. Elaborate calculations have been made to determine the time necessary to extinguish a "wobble." They are based on the supposition that the continents jumped up suddenly. Better prove this last first, before wasting nerve cells and grey matter by calculations.

SOME STATISTICS recently published of the lending library at Liverpool, established under the Free Libraries' Act, are not encouraging. The issues of works of fiction reached 309,425, while the total of all other departments was 57,578. Is it worth while to tax the nation in order to encourage the reading of novels?

CAPTAIN BARNABY'S new book, "On Horseback through Asia Minor," is out.

VICTOR HUGO'S new work is to be called "Histoire d'un Crime—Déposition d'un Témoin." It is a history of the *coup d'état* of 1851. The *Graphic* weekly will publish an English translation as a serial.

Chess.

(Conducted by J. G. ASCHER, Montreal.)

TO CORRESPONDENTS.

All communications to be addressed to the Chess Editor of the "New Dominion Monthly," Box 37, P. O., Montreal.

F. H. A., QUEBEC.—We await your promised account of the ancient Canadian match.

CLIPPER, NEW YORK.—Received with thanks.

J. W. S.—This column is much indebted to your several communications.

S. R.—Pawn takes pawn would have been the proper play.

TOURNEY.—For result, we refer you to present number.

ODDS.—When the odds of Queen's Rook are given, Castling is allowed on Queen's side. Rook to Q. sq., King to Q. B. sq.

GAME 16.

From the Glasgow News of the Week.

The following interesting game is one played in the Muzio Gambit Tourney, last month, at the Hull Church Institute, between Messrs. Mortson and Morris.

WHITE.	BLACK.
<i>Mr. J. N. Mortson.</i>	<i>Mr. R. Morris.</i>
1. P. K. 4.	1. P. K. 4.
2. P. K. B. 4.	2. P. × P.
3. Kt. K. B. 3.	3. P. K. Kt. 4.
4. B. Q. B. 4.	4. P. Kt. 5.
5. Castles.	5. P. × Kt.
6. Q. × P.	6. Q. K. B. 3.
7. P. K. 5.	7. Q. × P.
8. P. Q. 3.	8. Kt. K. 2.
9. B. × P.	9. Q. × Kt. P.
10. B. × Q. B. P.	10. P. K. B. 4.
11. Q. R. 5. (ch.)	11. Kt. Kt. 3.

12. Q. × B. P.	12. Q. Kt. 2.
13. B. B. 7. (ch.)	13. K. K. 2.
14. R. K. sq. (ch.)	14. Kt. K. 4.
15. B. × K. Kt.	15. Q. × K. B.
16. B. × R. (dis., ch.)	16. Q. K. 3.
17. B. B. 6. (ch.)	17. K. K. sq.
18. Q. mates.	

GAME 17,

Lately played at the Montreal Chess Club, Black giving odds of Pawn and Move.

WHITE.	BLACK.
<i>Mr. J. W. S.</i>	<i>Mr. A. S.</i>

Remove Blk's K B P.

1. P. to K. 4.	1. P. to K. 3.
2. P. to K. R. 4.	2. Kt. to K. B. 3 (a)
3. P. to K. 5.	3. Kt. to Q. 4.
4. P. to Q. 4.	4. B. to K. 2.
5. B. to Q. 3.	5. Castles.
6. Q. to R. 5.	6. Kt. to B. 5.
7. Q. takes P. (ch.)	7. K. to B. 2.
8. B. takes Kt.	8. R. to R. sq.
9. (b) And White mates in two moves.	
(a) Weak.	
(b) White managed the attack very well.	

GAME 17.

WHITE.	BLACK.
<i>Mr. Charlisk.</i>	<i>Mr. Laughton.</i>

CENTRE GAMBIT.

1. P. to K. 4.	1. P. to K. 4.
2. P. - Q. 4.	2. K. P. × P.
3. K. Kt. - B. 3.	3. K. B. - Kt 5 ÷
4. P. - Q. B. 3.	4. Q. 2d. P. × P.
5. Kt. P. × P.	5. K. B. to B. 4.
6. K. B. - B. 4.	6. P. - Q. 4.
7. K. B. × P.	7. Q. K. B. 3?
8. Q. B. - Kt. 5.	8. Q. - her Kt 3.

and White announced mate in four moves. If Black S...Q to K Kt 3, White wins her or forces mate; the correct move was Q to her 3.—H. C.

GAME 18,

played at the Sixth Annual Congress of the Dominion Chess Association, held at Quebec, 28th Aug., 1877.

IRREGULAR OPENING.

WHITE.

BLACK.

*Mr. J. W. Shaw.**Mr. E. Sanderson.*

1. P. K. 3.
2. P. K. Kt. 3.
3. P. Q. 4.
4. P. Q. B. 4 (b)
5. Q. Kt. B. 3.
6. Q. checks.
7. B. Q. 2.
8. B. × B.
9. Q. Q. Kt. 3.
10. Q. × Q. Kt. P.
11. P. Q. B. 5-
12. Q. Q. R. 6.
13. B. × Kt.
14. P. Kt. 3.
15. B. Kt. 2.
16. Q. B. sq.
17. P. B. 3 (e)
18. B. × P.
19. K. Q. 2 (d)
20. K. B. 3.
21. R. K. sq.
22. R. × R.
23. Q. interp :
24. Q. interp :
25. B. × B.
26. K. Q. 3.
27. Kt. B. 3.
28. Kt. K. 5.
29. P. × Kt.
30. R. Q. sq.
31. Q. B 3 (f.)
32. Resigns.

1. P. K. 4.
2. P. Q. 4.
3. P. K. 5 (a).
4. K. Kt. B. 3.
5. K. B. Q. Kt. 5.
6. Q. Kt. B. 3.
7. B. × Kt.
8. Castles.
9. B. K. 3.
10. Q. Q. 2.
11. Q. R. Kt. sq.
12. Kt. Q. Kt. 5.
13. R. × B.
14. B. Kt. 5.
15. Q. B. 4.
16. Q. R. 4.
17. P. × P.
18. R. K. sq.
19. Q. Kt. 4.
20. R. (Kt. 5) Kt. sq.
21. R. × P. (ch).
22. Q. × R. (ch).
23. Q. B. 8 (ch).
24. Q. R. 6.
25. Q. Kt. 5 (ch).
26. Kt. × B.
27. R. K. sq.
28. Kt. × Kt. (ch).
29. R. × P.
30. P. Q. B. 3 (e)
31. R. K. 6 (ch).

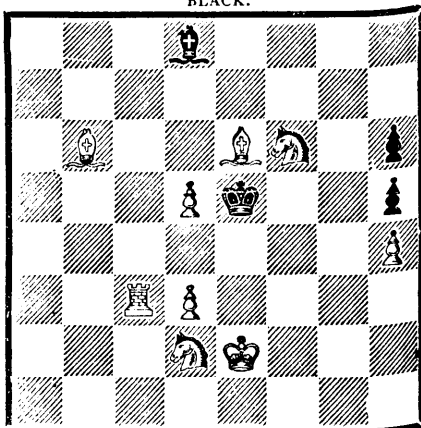
NOTES TO GAMES 18.

- (a) We dislike this move.
- (b) Correct reply.
- (c) Imprudent. Kt. to K. 2nd seems far preferable. Move in the text leaves whites K. P. to be assailed in the future with the K. R., also the Kt. at the ugly square of Kt. 5th.
- (d) Now White is in for the storm, and all owing to premature advance of B. P.
- (e) Very tame. Proper move was P. to Q. 5 threatening make next move.
- (f) A blunder, but the game was irretrievably lost owing to the nature of the position.

PROBLEM No. 11.

By J. H. Blackburne, Esq., the celebrated English player.

BLACK.



WHITE.

White to play and mate in three moves.

SOLUTION TO PROBLEM NO. 10.

WHITE.

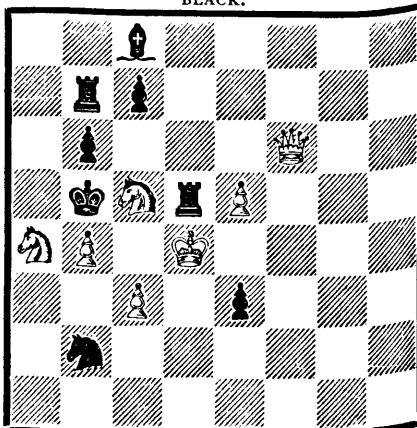
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- | | |
|---------------------|-----------------|
| 1. Q. to Q. R. sq. | 1. P. takes Kt. |
| 2. Q. takes P. (ch) | 2. K. moves. |
| 3. Q. mates. | |
- if
- | | |
|-------------------------|----------------|
| 2. Q. to K. R. sq. (ch) | 1. P. to Q. 7. |
| 3. Q. mates. | 2. K. moves. |

PROBLEM No. 11.

By A. Saunders, Esq. (Montreal).

BLACK.

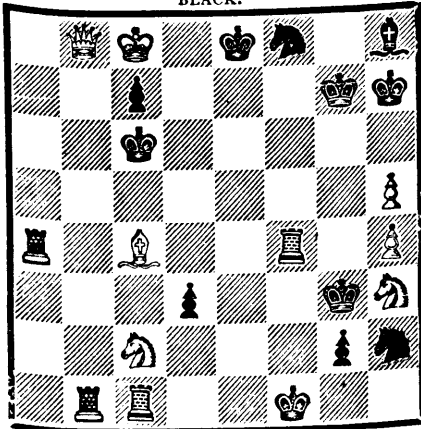


WHITE.

White to play and mate in three moves.

We clip the following from the September number of the *Westminster Papers*. It is doubtless one of the most eccentric if not the most extraordinary chess problem on record.

PROBLEM No. 12.
BLACK.



WHITE.

The conditions of the above Six King Problem are White to play and mate the six Kings simultaneously in seven moves.

CHESS WAIFS.

We regret to learn there is to be no immediate award of prizes, owing to a little misunderstanding occasioned by certain games having been won and lost by default (absence of one of the players). There is talk of a protest having been made by one of the Quebecers. We trust, however, ere the issue of our next number, the matter will receive adjudication at the hands of the President of the Association satisfactory to all concerned.

Mr. Bird's book is expected out in November. The shilling stake practice of playing chess at the Divan and clubs in London, is about being abandoned.

The rooms of the Montreal Chess Club have resumed their wonted lively appearance on club nights.

The Anderson Jubilee was a great success. There were 27 entries in the Problem Tourney. The festivities concluded with a match between the great master and Paulson (5 games to win). Result : drawn, 1. Anderson won 3 ; Paulson won 5.

CANADIAN CHESS ASSOCIATION.

The meeting terminated during the first week of September. We now give :—
TABLET representing Score of Games played in Canadian Chess Association Tourney, held in Quebec, 28th August, 1877.

	Howe.	Sanderson.	Hall.	White.	Henderson.	Shaw.	Fletcher.	Hicks.	Pope.	McLeod.	Bradley.	
H. A. Howe.....		I	½	½	I	½	I	†	I	I	I	8 ½
E. Sanderson.....	o		I	½	½	I	I	†	I	I	I	8
E. B. Holt.....	½	o		I	I	I	½	†	I	½	I	7 ½
J. White.....	½	½	o		I	I	I	½	I	o	I	6 ½
J. Henderson.....	o	½	o	o		I	I	†	o	I	I	5 ½
J. W. Shaw.....	½	o	o	o	o		o	†	I	I	I	4 ½
E. T. Fletcher.....	o	o	½	o	o	I		†	½	o	I	4
W. H. Hicks.....	*	*	*	½	*	*	*		I	I	I	3 ½
E. Pope.....	o	o	o	o	I	o	½	o		I	I	3 ½
R. D. McLeod.....	o	o	½	I	o	o	I	o	o		½	3
C. D. Bradley.....	o	o	o	o	o	o	o	o	o	½		½

I—Won.
+ Won by default.
* Lost by default.
o—Lost.
½—Drawn.



MUSICAL EGOTISM.

Herr Maestro (who has been indulging the company with two Masses, a dozen Symphonies, a dozen Impromptus, and a few other little things of his own).—"VILL YOU NOT ZING ZOMHING, MISS ANHELICA?"

Miss Angetica (with diffidence, pulling off her gloves).—"H'M!—H'M!—I'M AFRAID I'M A LITTLE HOARSE TO-DAY; BUT IF—"

Herr Maestro (with alacrity).—"ACH, SOH! IN ZAT CASE I VILL NOT BRESS YOU. I HALF GOMBO!"

Miss Angetica ("Yes?").—"Needs to do so."