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CHAMBERS'S JOURNAL OF POPULAR LITERATURE, SCIENCE, AND ART.

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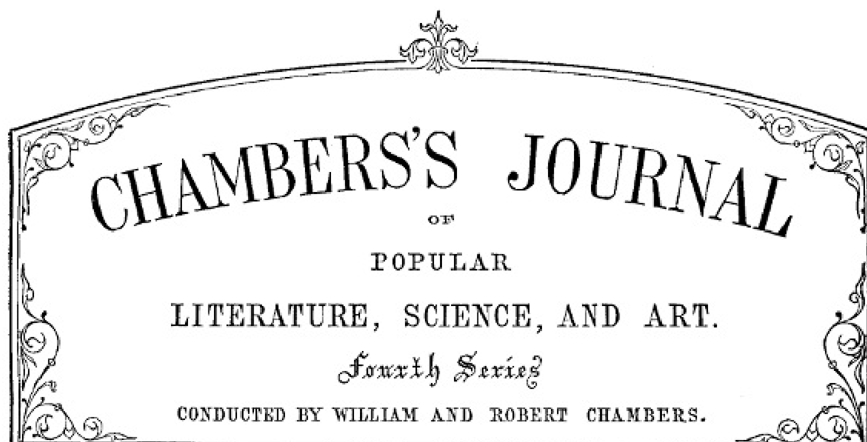

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CHRISTMAS-TIME.

'So many men so many minds' has been a proverb long before our days, and will be to the end of time and human history; and uniformity of sentiment is the one thing which men need never hope to attain.

Christmas-time is one of these battle-fields of feeling. To some it is just the consecration of so many circumstances of torture; to others the meeting-point of so many facts of pleasure. From the conventional greeting to the orthodox dinner—from the 'seasonable gifts' that are more obligatory than voluntary, to the toast that heralds the punch, and the dreams that follow on that last glass—all is so much pain to the flesh and weariness to the spirit; and they wonder how any one can find it otherwise. What is there in Christmas-time to make it pleasurable? they say. The gathering together of the family? A lot of rough boys home from school, who spoil the furniture and tease the dogs, lame the horses and ravage the garden, make the servants cross, the girls rude, and the younger children insubordinate; who upset all the order of the house, destroy its comfort like its quiet, and to whose safe return to discipline and your own restoration to tranquillity you look forward with impatient longing from the first hour of their arrival to the last of their stay? Or the advent of your married daughter with her two spoilt babies, who cry if they are looked at and want everything that they see, and that very objectionable young man her husband, with his ultra opinions and passion for argument, whom she would marry in spite of all that you could say, but to whom you can scarcely force yourself to be decently civil, not to speak of cordial, and whose presence is a perpetual blister while it lasts? Is this the family gathering about which you are expected to gush?—this with the addition of your son's fine-lady wife who snubs his mother and sisters with as little breeding as reserve, finds nothing at your table that she can eat, lives with her smelling-bottle to her nose and propped up with cushions on the sofa, and gives you to understand that she considers herself humiliated by her association with your family, and your son as much exalted as she is degraded? This is the domestic aspect of Christmas-time which is to make you forget all the ordinary troubles of life, creating in their stead a Utopia where ill-feeling is as little known as *ennui*, and family jars are as impossible as personal discomfort and dissent. Holding this picture in your hand, you decline to subscribe your name to the Io pæan universally chanted in praise of Christmas, and wrap yourself up in sullen silence when your neighbour congratulates you on having all your family about you, and wishes you a merry Christmas as if he meant it.

If the domestic aspect is disagreeable, what is the social?—A round of dinners of which the *menu* is precisely the same from Alpha to Omega:—turbot and thick lobster-sauce; roast-beef and boiled turkey; indigestible plum-pudding and murderous mince-pies; with sour oranges and sweet sherry to keep the balance even, and by the creation of two acids perhaps neutralise each other and the third. This is the food set before unoffending citizens under the name and style of Christmas dinners for the month or six weeks during which the idiotic custom of Christmas dinners at all is supposed to last. You are expected to live in this monotony of dyspepsia and antipathetic diet till you loathe the very sight of the familiar food, and long for a change with a vehemence which makes you ashamed of yourself, and more than half afraid that you are developing into a gourmand of the worst kind.

As if your nights were not sufficiently broken by the horrible compounds which trouble your digestion and disturb your brain, torturers known as the 'waits' prowl through the streets from midnight to dawn, causing you agonies beyond those which even the hurdy-gurdy men inflict. You are just falling to sleep—painfully courted and hardly won—when a hideous discord worse than the wailings of cats startles you into a nervous wakefulness which banishes all hope for that night. What can you do? They are too far off for that jug of water to take effect, and you must not {802} fire; anathemas do not hurt them, and if said aloud only waken up your wife and make her cry if she does not preach. You have nothing for it then but to lie still and groan inwardly, devoting to the infernal gods all the idiotic circumstances by which your life is rendered wretched, and your health, already frail, set still further wrong. In the morning, when wearied and nervously feverish from want of sleep, you go into the garden for a little quiet and delectation, you find your greenhouses stripped of the flowers which you had been lovingly watching for weeks, and your evergreens as ridiculously cropped as a shaved poodle. This is the day for the decoration of the church, and you, having made an expensive hobby of your garden, have to contribute what has cost months and good money to rear, for the childish satisfaction of John and Joan, lasting just two hours and five minutes. Not only have you lost your flowers and your evergreens—that splendid holly, which yesterday glowed like a flame, today nothing but a bundle of chopped ends!—but you know that your favourite daughter is flirting with the curate, and that a great deal is going on under cover of wreaths and crosses, laurustinus and chrysanthemum, of which you strongly disapprove yet cannot check. It is Christmas-time; decorating the church has become in these later days a kind of religious duty; and as a conscript father of your village, you must not forbid your daughter this pious pleasure any more than you can refuse your costly contribution in kind.

Turn to the financial side of the time; and what have you?—bills coming in that you neither expected nor knew of, and every one looking for a Christmas-box, and insolent or irritated if they do not get it. The servants obsequious to the worth of half a sovereign—tradesmen and their lads punctual in anticipation of half-crowns—postmen levying blackmail, and watermen and dustmen demanding as their right that they should be fee'd for their persistent neglect of duty—every one making a dead set at your pocket and trying to get your money for themselves—the very children more caressing and affectionate because it is Christmas and papa always gives them something

on Christmas-day:—You groan as you ask yourself where is disinterestedness on this earth?—and you groan still more as you draw your cheques and reduce your balance and wonder by what law of right it is that you should be the pipe by which other folks are to be supplied.

No; you see no good or pleasure in this boasted Christmas-time as we keep it up in our benighted country. Its mirth is a sham and its inflictions are only too real. A time of tumult and expense, of indigestion and discomfort, you wait, grimly or fretfully as your mood may be, till it has passed and the current of your life is allowed to flow evenly as before. When you hear people sing its praises you long to stop their mouths, as you longed to silence the waits who woke you up out of your first sleep and spoilt your rest for the night. What manner of men are these, you think, who can find cause of congratulation in so much absurdity, if the fun is real to them—so much dreary make-believe, if it is unreal? You despise your genial, laughing, merry-hearted neighbour who goes into everything *con amore*, and accepts it all, from forfeits and snapdragon to plum-pudding and Christmas-boxes, as if he really liked it. You think what a fool he must be to be pleased with a rattle, tickled with a straw like this. But for the most part you do not believe in his mirth; and then you despise him still more as a hypocrite as well. For a hypocrite shamming folly is an offender against reason as well as truth, whom you find it hard to forgive, let the motive of his mummery be what it may.

This is one side of the question; your neighbour takes the other.

Who on earth, he says with his hands in his pockets, his back to the fire and his kindly smiling face to the room, who on earth can grumble at the facts of Christmas-time? For his part he finds it the jolliest season of the year, and he finds each season as jolly as the other, and all perfect in their own appointed way. He is none of your crying philosophers who go through life bewailing its miseries and oppressed by its misfortunes. Not he! He thinks the earth beautiful, men and women pleasant, and God very good; and of all occasions wherein he can transact his cheerful philosophy, Christmas is the best. The boys are home for their holidays; and it is a pleasure to him to take them out hunting and shooting, and initiate them into the personal circumstances belonging to English country gentlemen. He looks forward to the time when they will take his place and carry on the traditions of the family, and he wishes them to be worthy of their name and an honour to their country. He is not one of those nervous self-centred men who live by rule and measure and cannot have a line of the day's ordering disturbed. He likes his own way certainly; and he has it; but he can press his elbows to his sides on occasions, and give room for others to expand. He does not find it such an unbearable infliction that his boys should come home and racket about the place, even though they are a little upsetting, and do not leave everything quite as smooth and straight as they found it. He remembers his own youth and how happy it made him to come home and racket; and he supposes that his lads are very much the same as he was at their age. He thinks too that they do the girls good—wake them up a little—and while not making them rough or rude—the mother takes care of that—yet that they prevent them from becoming prim and missy, as girls are apt to be who have no brothers and are left too much to themselves. Certainly he does not approve of the flood of slang which is let loose in the house during their stay; but school-boy slang at the worst is not permanent, and in a week's time will be forgotten.

As for the married daughter's children, they are the merriest little rogues in the world; and his wife looks ten years younger since they came. She was always fond of babies; and her grandchildren seem to renew her own past nursery with all the pleasure and none of the anxiety of the olden time. He rather wonders at his girl's taste in the matter of her husband—most fathers do—and cannot for the life of him see what there is to love in him. But if not an Alcibiades he is a good fellow in the main, and makes his young wife happy; which is the principal thing. And if his daughter-in-law is a trifle stiff, and fond of giving herself fine-lady airs, he for his part never stands that kind of nonsense, and will laugh her out of it before she has been twenty-four hours in the house. He finds good-humour and taking no offence the best weapons in the world against folly and ill-temper; and prefers them as curative agents to any other. The girl is a nice girl enough, but she has been badly brought up—had a lot of false ideas instilled into her by a foolish mother—but when she has been away from the old influences, and associated with themselves for a little while, she will open her eyes and see things in their right light. Who indeed could resist the sweet sensible influence of his wife, her mother-in-law?—and are not his girls the very perfection of honest wholesome English ladies? It will all come right in time; he has no doubt of that; and meanwhile they must be patient and forbearing for Dick's sake, and not make matters worse than they are by their own want of self-control. {803}

Then as to the Christmas-boxes and the tips sacred to the season—well! well! after all they do not amount to much in the year, and see what pleasure they give! A man must be but a poor-spirited surly kind of hound who does not like to see his fellow-creatures happy; and a very little kindness goes a great way in that direction. He takes care to live within his income, and therefore he has always a margin to go on; and he does not object to use it. The servants have been very good on the whole, and do their duty fairly enough. And when they fail—as they do at times—why, to fail is human, and are they alone of all mankind to be blameless and never swerving in the right way? And are they alone of all mankind to be judged of by their worst and not by their best?—to be blamed for failure, but not praised for well-doing? He does not think so; and not thinking this, his half-sovereigns are given freely without the grudging which makes them an ungracious tax instead of a kindly voluntary gift. The tradespeople, too, do fairly well, and—they must have their profit like any one else! Those Christmas-boxes to their lads may be the nest-eggs for future savings; and even if they do go in a little finery or personal pleasure instead—young people will be young, and his own boys are fond of being smart and amused: so why not these others? You

grumble at the waits? If you in your warm bed, well fed, well clothed, prosperous altogether, fret at the loss of an hour's sleep, what must these poor fellows feel, out in the cold frosty night, with the wind blowing and the sleet falling fast, and they not half fed nor a quarter clothed? For his own part he would like to give them a glass of hot grog all round; and as for grumbling at the few coppers which they brave all this physical discomfort to earn, he makes it shillings, and hopes it will do them good. We must live and let live, he says with his broad smile; and if we are sometimes a little inconvenienced by the efforts made by the poor to accomplish the art of living for their own parts—we must remember that our loss is their gain, and that they are men and women like ourselves—fathers of families who want to keep the pot boiling and the fire alight—mothers who love their children, and are anxious to do the best for them that nature and man will allow.

You complain of indigestion and grumble at the monotony of your Christmas fare?—That is strange! Who can grumble at good plain succulent meat?—and why do you eat the sweets if they disagree with you? Neither pudding nor mince-pie comes into the eternal necessities of things, and you would do very well if only you would refrain. He does not eat things that he cannot digest, and in consequence he sleeps well, and when he wakes has neither regret nor remorse. Surely that is not such a painful trial—to forbear eating what is hurtful to your health, and in touching your health corroding your happiness as well.

In a word, the whole difference of the spirit in which we meet the facts of Christmas depends on the good or ill humour with which we are naturally endowed, and which we have cultivated by common-sense on the one hand, or suffered to ride rough-shod over our reason on the other. If we are unselfish and sympathetic, Christmas-time is as pleasant to us as popular tradition would make it; if we are egotistical and peevish, it is a wearisome infliction and a sham which no honest man can pretend to believe in, nor any sensible one to admire.

For our own part we believe in Christmas, because we believe in the kindness of man to man, in genial good-humour, in unselfishness, and the liking of wholesome natures to give happiness; and so far as we have gone yet we have seen no reason to change our views. A merry Christmas then to you all, friends, readers, and countrymen; and a happy New Year to follow after; and may God bless the rich and care for the poor, and lead us all in the right way while the day lasts and before the night has come!

A CAST OF THE NET.

THE STORY OF A DETECTIVE OFFICER.

CHAPTER IV.

Long after it had grown quite dark, all remained quiet, and at last I resolved upon making a move. I had determined upon fetching Peter Tilley. I had plenty of assistance, but I thought I should like to have Peter with me. So I went down to the ferry; a gas-light which burned at the corner shewed me before I left my post that the bony ferryman was not there; and choosing a pretty good boat, with a strong young fellow to pull, I got in. It was a most unpleasant night; as dark as pitch, which was bad enough, but every now and then it lightened, which was worse, as it dazzled my eyes, and made me think we were running smash on board some great vessel which I had not seen a moment before, and couldn't see a moment after. However, the boatman was used to all kinds of weather, I suppose, and knew the river thoroughly; so through the darkness and the rain, which never left off for a moment, we reached the other side.

I left the boat to wait for me, and ran up to the *Yarmouth Smack*. I looked in, and saw Peter leaning against the bar and smoking a short pipe, as a labourer ought to do; and he was talking in a friendly way to some rough-looking fellows. I slipped in, and using the name we had agreed upon, spoke to him. He knew my voice of course; but seeing me so changed, for my make-up was really splendid (it was, although I say so that shouldn't), it gave him such a shock that he was {804} obliged to put the pewter down he was going to drink from and look steadily at me before he answered. 'I'm acoming,' he said at last, and we got outside; when, as we walked down to the ferry, I gave him a sort of idea of what was going on, and how I expected to make a great catch that night. Peter of course was very glad to be in for such a big thing as this, for he had never been mixed up with anything so important.

Not to trust the boatman too much, I kept Peter back a few yards from the water while I finished my story, standing a little on one side, so as to be out of the way of the people who came and went to and from the ferry. While I was talking to him, a wherry ran in; we heard her grate on the pebbles and the sculls rattle as the man laid 'em in; but that we had heard before. It's a part of my habit to notice little things however, and I looked to see who had come in by this boat. There was only one passenger, a woman, and she passed us walking quickly; but quick as she walked, I saw her, and she saw me. Blessed if it wasn't Miss Doyle! My being there was no odds to Miss Doyle, nor could it have signified to her if she had seen me fifty times; yet I felt I would rather not have met her just then; it looked unlucky, and she was such an uncommonly sharp one too. Sharp or not, I couldn't see what she could make out of my standing under a wall on a wet night talking to another labourer.

Having finished my explanation, we both got into the wherry, and I asked the man if he would

like a good long job, which might perhaps last all night.

'The longer the better, governor,' he says, 'if the pay is accordin'.'

'The pay *will* be accordin',' I answered; 'and so you are engaged.'

The first thing I made him do was to row round that oyster-smack, for the tide had risen enough to take us round her. I shewed no light, but we went inside her twice; and the fellow on the watch was very sharp, so he was leaning over the side when we came round the second time, and I could say quite quiet-like: 'I am in this boat now—watch the river.' That was quite enough; he knew he would not now have to look to the *Anchor* for signals.

After this began what I believe was the most disagreeable sort of patrol I ever had. There was a time when I used to envy the Thames police; but I can't say I ever did after that night. We were obliged to be in motion almost continually, because we did not know from which side of the river the paper might come, and we weren't quite sure that it would come at all, especially on that night; and I don't know, speaking from my own experience, that there is anything more trying to the spirits than the pulling backwards and forwards and loitering about on the river Thames in a raw October night with a small thick rain falling. Twice we landed, and went once to the *Smack* and once to the *Anchor*. I couldn't grudge the men a glass of hot grog; in fact I was obliged to have some myself, even if I missed my capture through it.

It grew later and later; the flashes of lightning still came at long intervals; but the lights on the shore went out, and excepting the gas-lamps which burnt at street-corners, ferries, and wharfs, all was dark. The traffic on the river had long ceased, no shouts or rattle of wheels came from the shore; and the rain still falling, it was, I give you my word, most horribly miserable, dull and sloppy beyond description. Twelve o'clock had struck, and one, and perhaps half an hour beyond it. I had cautioned my companions to speak very low; so the boatman only whispered when he said: 'It's as quiet as it is likely to be, governor, if you've got anything to run. I have just seen the police galley creep along on the other side; I see her under that lamp. Now's your time.'

He thought we were smugglers! Perhaps he didn't care if we were thieves. I told him to be patient; when at that very instant, just as we were creeping along under the lee of a coal-barge, a wherry shot very silently by, right in front of us, going across stream, and not six feet from our bows. In her sat the sulky ferryman; I knew him at a glance, dark as it was. 'Pull after that wherry,' I said.

'Peter Tilley, my lad,' I continued, turning to Peter, 'the time's acoming, I think.'

'I'm precious glad of it,' says Peter; 'for I'm catching a cold in my head every minute I sit in this confounded boat; and it's all soaking wet where I'm sitting.'

Our man pulled on; he was a very strong fellow, as I have said, and we could have overtaken the other boat directly; but this of course I did not want. I knew where to look for the old scamp; and sure enough, after a few strokes across stream, he bent to the left and ran under the bows of the Dutch trader.

All was dark and silent as the grave aboard the ship; but that didn't deceive the old boatman, nor did it deceive me. I stopped our man in the shade of the next vessel, if you can call anywhere a shade, when it was all pitch dark. We had not been there a minute before I heard a slight noise—it was impossible to see any one unless he stood between you and the sky—and then I could tell by the sound that a man had dropped into the wherry. There was no need to tell me what man it was. With an almost noiseless dip, the ferryman dropped his sculls into the river again and rowed on, we still after him. I took it for granted he was going to the other side of the ferry; but he suddenly bore off to the right, and rowed on for some little time, then striking in between two vessels, he went straight for the land.

'Where is he going to?' I whispered.

'To the landing at Byrle's wharf,' says the boatman in the same tone.

So he was; and it appeared this landing-place was at the farther side of the wharf; that is, lower down the river.

It was so dark we could hardly see them—for we could just make out there were now two persons in the boat—but as they reached the shore, a lamp that was burning on the wharf helped us a little. We could not clearly see what they were doing; but they certainly got out of the boat, and as certainly there were then more than two figures moving about, and seemingly engaged in placing parcels in the wherry. But it was very gloomy there; they were in the shade of the wharf, and the lamp glimmered weak and faint through the thick rain. It was the more difficult to see what was being done, because there were several boats tied up to the landing-place, making some confusion in the darkness. At last, however, we could see that they were pushing off from the shore; so it was time for us to move. We pulled back for a while (there was no doubt as to which way the others would come), and then sheering off, lay between two colliers until we saw the wherry we had watched go by, and then we once more pulled after them. {805}

'I'm blest if I don't think there's another boat following *us*,' says Peter Tilley, staring as hard as he could behind us. I looked, but couldn't see anything; and Peter owned he might have been mistaken.

We could not make out how many there were in the foremost boat. There was only one man rowing, that was plain; and he pulled short round at the proper place, as I knew he would, and rowed towards the Dutch trader. As he did so, we lost him for a second, a big steamer lying between us; but the hull of this vessel did not obstruct the view up the river. I seized the moment,

and waved my lantern twice. It was all right. As quick as thought the light on board the oyster-smack was moved twice also, and then we too were pulling across the stream. I wanted to capture my men on board the trader, as otherwise the paper might be got rid of, because I couldn't be positively certain that it was not already on board. In fact, Mr Edmund Byrle was my chief aim, not the skipper.

The wherry pulled under the bows of the vessel; we followed just in time to see, by a very convenient flash of lightning, two packages handed up; then a figure, which we had recognised by the same flash as the bony ferryman, got into the ship. As he disappeared, our wherry touched the vessel; and at the same instant, to my great relief, a long black Thames police galley came alongside us, and its crew, five constables, with Barney Wilkins, who was there as guide, clambered up like cats. I and Peter imitated them, but not quite so quickly; and when I looked over the bulwark, I saw by the light of a couple of lanterns, screened from the outside, four or five men, the boatman and the skipper being two, lifting up a great lid which fitted in the deck—the hatches I heard it called—while by their side lay the packages of paper. I could not see Mr Byrle; but there was no time to consider; we all jumped in at once, the men looking round in amazement at the noise. I fancied that just then I heard a shout from the boat.

'What do you all want here?' said the skipper angrily.

'We hold a warrant'—I began.

'Oh, it is *you*, is it?' he screeched, like a hyena, or something of that sort. 'I owe you a little for a past score, and you shall have it.' As quick as lightning he pulled a long straight knife from the side of his trousers, where it must have been in some sort of sheath, and jumped at me with such suddenness that he would have stabbed me, only Barney Wilkins snatched a handspike from the deck, and dashing between us, hit him down with such a blow, that the skipper fell with a crash like a bullock when it is killed, the blood pouring from his head instantly.

It was all as quick as thought. The other men were all seized in a breath. So quick was it all done, that I had no idea Barney was hurt, until he reeled, made a wild clutch as if he caught at something for support, and then pitched forward on his hands and knees.

'Hollo, Barney!' I said, stooping down to him. 'What's the matter, old fellow?'

'It's all up, Mr Nickham,' he gasped; 'he's done me. I only hope I've killed him. Where's the other?'

'Oh, never mind the other, Barney,' I says. 'Where are you hurt?'

But as I spoke, one of the men came with a lantern, and Barney had no occasion to answer me, for I could see a straight stream of blood running from his chest on to the deck; and his hands giving way from weakness, he fell over on his side.

'Pull in for the shore, you, sir!' said the sergeant of the Thames police to my waterman. 'You know Marigold Street? Knock up Mr Gartley, and tell him what has happened. Say we are afraid to move the man to his house, so he had better come aboard.'

'Send one of your own men, will you?' answers the boatman. 'I've got something to tell the governor' (that was me), 'as I think he ought to know.'

'Cut away then, Bill,' says the sergeant to a constable; 'these fellows are ironed, and we can manage all that are aboard this craft.'

So the man went off in my wherry; and the Thames men tried to make poor Barney a little more comfortable, while I undid his waistcoat, hoping to stop the bleeding.

'It ain't no use,' he said; but in that short time his voice was almost gone, and we could tell that he was dying. 'I'm done for, Mr Nickham. If there's a reward, you'll act fair and square, I know; you always was a gentleman—let my sister have'—— And with that he gave a gasp, and was dead.

I rose up, dreadfully vexed for the poor chap. The sergeant and one of his men were looking after the skipper, when I felt myself touched on the arm.

'I say, sir,' said the boatman, 'when I'm in for a thing, I go through with it honourable. Did you know as you was followed?'

'Followed? no!' I said.

'I thought we was!' said Peter Tilley.

'We was followed, sir, by a light wherry with two people in it,' continues the boatman; 'and when they see our boats, they held hard; and as you all boarded the ship and the noise began, they rowed away as hard as they could go.'

'Which way did they go?' I said.

'Down river,' says the man. 'But it's of no use thinking of looking after them now. They are ashore long afore this.'

This was likely enough; and it was quite certain that Mr Edmund Byrle was one of the two in the boat, and I had lost him for the present. Well, it couldn't be helped; so we set to work to question the men and search the ship, till the doctor came. The men knew nothing more about the business than that they were going to have two passengers, a lady and a gentleman, this voyage. One of the Thames men understood Dutch, or we should not have heard even this scrap of information. The sulky boatman never uttered a word, except that once he said as I passed him, and he said it with a bitter curse: 'I always had my doubts of *you*.'

The doctor came off; but poor Barney was stone-dead, while the skipper's skull was badly fractured. However, the paper was all there; so I supposed, and so it proved; and I shouldn't have cared if the skipper's head had been broken fifty times over. {806}

We got our prisoners to the shore, leaving the craft in charge of a Thames police galley that came in answer to our signals; and late as it was, I drove with Peter Tilley in a cab to the City. Our people there were immensely glad, I can tell you; and when I went over to the Bank (for there was no need for secrecy or dodging now), I thought the gentlemen never would have left off paying me compliments. Poor Barney Wilkins that was dead deserved most credit; but it could not do him any good to say so now, so I let them go on. The paper was examined, and found to be exactly the quantity required; enough, I believe, to have made about twenty thousand bank-notes. Ah! if they *had* got into circulation!

I hope you will understand, however, that I did act fair and square; and when the reward was paid (and the Bank people did come down most liberal; I bought my house at Pentonville with my share), I told the gentlemen about poor Barney and his wishes; and I'm proud to say they found his sister out and took her away; and after a time she went abroad with kind people who looked after her, and took care of her money till she got married, and did well. Why, she sent me a snuff-box made out of pure Australian gold, with a letter signed by herself and her husband, who was a butcher in a great way of business out there; and they sent it as an acknowledgment of my having acted all fair and square. I promised so to do, and I did.

Edmund Byrle was never caught, and so far as we were concerned, was never heard of; and if it hadn't been for his father, I should never have understood a lot of things that puzzled me. I had given a pretty good guess as to how Miss Doyle came in the first place to inquire about Mr Byrle and the detective; a very clever idea in itself, but like many other clever things, it lost her the game. Mr Byrle had talked with his friends about employing detectives; and Miss Doyle knowing about the Bank paper, and being always on the watch, had got hold of just enough to mislead her. She went out with Edmund Byrle to Turkey, I think, and was married to him; and old Mr Byrle sent out a friend to see them; and it was in this way I got the particulars. It appears she knew me again—only as the limping labourer, of course—when she saw me talking at the ferry to Tilley. But she knew *him* as the detective at the *Yarmouth Smack*, and she thought that although it might be all right, yet a detective was a dangerous customer, and his acquaintances might be dangerous also. Consequently she tried to persuade Edmund to put off his journey; but he wanted the money for the paper, and wouldn't listen to her. But he agreed at last to go aboard in another boat, which satisfied her, as she felt so certain the skipper's boat would be attacked. As I have explained, her precaution saved him from fifteen years' 'penal,' which is the least he would have had. The skipper was sent for life, having killed a man in his arrest; but he didn't live six months in prison; he never got over the tremendous blow he received from Barney. All the reports spoke of his being a receiver of 'stolen goods.' The Bank paper was never mentioned, for the authorities did not want to unsettle the public again, or let them see what a narrow escape they had had.

And now comes about the queerest part of my story. Call me names if I didn't stop the thieving at Byrle's factory as well as recover the Bank paper, killing two birds with one stone.

It was all through my catching the bony ferryman. Finding that things was going hard with him, and hoping to make them easier, and being disappointed that those who were concerned with him did not come forward with money to provide for his defence, he 'rounded' on them; he split on them all, and owned how he was the means of taking the metal over to a fence on his side of the water, the things being stolen by a mechanic and a watchman who were in league. (I see I have used the word 'fence;' this means a receiver of stolen goods; but though I have been warned by the editor of this magazine, we can't do without *some* slang words.)

Peter Tilley got a tidy present, and was noted for promotion through this business. I was glad of it, for Peter was a capital chap—never wanted to play first-fiddle; and I admire people of that disposition. I tell you what I did: I got the newest five-pound note of all what the Bank gave me, and they were all very clean and crisp, and I wrapped old Bob the gatekeeper's own sixpence in it; and I went to the factory and I stood a pint of ale, and says: 'Bob, here's your sixpence!' He hadn't known exactly who I was till then, for I had made excuses as usual; and then I'm blessed if he didn't quite cry over his luck. Mr Byrle too thought a lot of Bob's kindness, for I told the old gent about it; and I heard that on that very account he put six shillings a week on Bob's wages, and I was glad to hear it.

They couldn't keep me off the detective staff after this; and although I am free to confess—now I am on my pension and nothing matters to me—that I only stumbled upon these discoveries by accident, I was praised to the skies by those for whom I worked. However, it all died away, as such things do; but I had managed to get my house at Pentonville, as I have hinted; and a pleasanter neighbourhood I don't know, or one more convenient for getting about. I have had some rather odd adventures since I have lived in my street; you can't help seeing strange things, if you keep your eyes open in London. But I didn't begin to tell about *them*. I have finished my account of the robberies at Byrle & Co.'s and my story finishes in consequence.

FEATS OF ENDURANCE.

London, which has witnessed many strange doings in its day, was lately the scene of the most wonderful feats of pedestrianism ever accomplished within a given period.

Every hour, day and night, for six weary weeks a man plodded on his way round a measured track, until the grand total of fifteen hundred miles in one thousand hours had been made up, finishing his self-imposed task with his physical and mental faculties apparently unimpaired.

The task of walking fifteen hundred miles in a thousand hours had never before been attempted, and henceforth the new achievement will throw into the cold shade of obscurity even the marvellous act of walking a thousand miles in as many hours, which was once accomplished in 1809 by Captain Robert Barclay of Ury, a Scotchman, who proposed to perform the then incredible task of walking a thousand miles in a thousand consecutive hours. The proposition was received with every sign of incredulity, though, when the affair was finally arranged to take place, many thousands of pounds were staked on the event. Newmarket Heath was selected as the scene of the exploit, and the famous walk began on the 1st of June 1809, at midnight. It is unnecessary to repeat the details of this feat; it will suffice to mention that the enterprising captain completed his task on the 12th July, at four o'clock in the afternoon. {807}

Since then, an attempt has, we believe, been made to walk the same distance *backwards*; and within the past twelve months, Weston, the American pedestrian, has performed some remarkable exploits of the kind; being however at last beaten by an Irishman named Kelly.

The hero of the lately completed task (fifteen hundred miles in a thousand hours) is a little Welshman of not more than five feet three and a half inches in height, and about forty-two years of age; while in personal appearance and general *physique* he presents anything but what is usually supposed to be the characteristic of a good pedestrian. His name is William Gale, and he is a bookbinder by trade, living at Clerkenwell.

At the commencement of his task on Sunday the 26th of August, he weighed no more than eight stone four pounds (8 st. 4 lbs.); and from that day until Saturday the 6th October, during a portion of every hour day and night, he pursued his monotonous way around the inclosure at Lillie Bridge grounds, Brompton. When the attempt was first announced, even those most acquainted with pedestrian feats where great endurance was required, expressed themselves dubious as to the result; and in order to have a reliable record of his proceedings, Gale requested the different sporting papers to appoint competent men as judges—a request which was at once generously complied with.

Thus we have an official report of his great exploit, and the public are enabled to judge for themselves on the nature of the feat performed. Gale's average pace appears to have been about four miles an hour; but when he had reached his thousandth mile he assumed a brave spurt, and footed it in ten minutes, or at the rate of six miles an hour. During the last few days of his walking he started rather stiffly at first, owing to the pain caused by the swelling of some varicose veins in his left leg; but undaunted by so great and manifest a disadvantage, and other disadvantages which we shall presently refer to, the gallant little Welshman 'plodded his weary way' with a determined pluck that won the admiration and applause of every one present.

On Friday the 5th October, the day before the finish of the tramp, Dr Gant of the Royal Free Hospital was called in to see this extraordinary walker, and after examining his legs, he pronounced Gale to be in excellent condition so far as his physical powers were concerned; there being no fever, the pulse only seventy, no murmur at the heart; and the varicose veins which had been the cause of so much pain to him, were rather better than worse, having considerably decreased in size. Perhaps the most remarkable part of the performance is, that it has been accomplished on a system of training which entirely sets at variance all athletic rules, for Gale partook of no fixed refreshment, neither did he have his meals at stated hours. His chief food was plain mutton-chops; and as an instance of how he varied his dishes, his afternoon meal on Friday the 5th October, which might have been either breakfast, dinner, or supper (so irregular had he been in this respect), consisted of a lobster and bread and butter, followed by a fried sole, and one or two cups of ordinarily strong tea. During the walk he also drank a good deal of beer—not strong beer, but the ale which is usually sold at fourpence per quart, which he seemed to prefer to any other kind, probably on account of its freedom from that tendency to increase rather than assuage thirst, so remarkably apparent in the stronger beers.

Many strange incidents occurred in the course of the six weeks, which were calculated to while away the time, and occasionally to bring a smile to the pedestrian's lips. For instance, a certain illustrated sheet, notorious for its very sensational cartoons, published a picture of Gale on the track followed by Old Time with the conventional scythe on his shoulder; and many people it would seem actually paid their money with the idea that they were going to see the two figures as thus represented. One man, who had evidently gone to the grounds for this purpose, had watched Gale go round the track several times, when he could no longer control his disappointment. He shouted aloud, angrily demanding his money back, because, as he said with the greatest *naïveté* possible, 'the beggar with the scythe hadn't turned up!'

As the last week of the great walking match wore on, signs of weariness in the indomitable pedestrian became painfully apparent, and many persons began to fear that the task he had set himself would after all remain unaccomplished. On several of the rounds he fell asleep whilst walking, and dropped to the ground; but this contact with mother earth seemed to revive him instantly, and he plodded on as pluckily as before.

At length success crowned his efforts; and at seventeen minutes past five o'clock (less a second) on Saturday afternoon the 6th October 1877, Gale terminated his long and dreary walk in the presence of a large, fashionable, and enthusiastic assemblage, who rewarded his efforts with several rounds of hearty applause.

From the commencement of his task to the finish Gale bore up against all obstacles with extraordinary pluck and determination, his last mile being performed in *ten minutes and eight seconds*. He was at once removed to the tent or pavilion under which he had snatched so many brief half-hours' rest, and was examined by three medical men, who found that his heart was quite natural in its movements, and that the temperature of his body did not exceed one hundred and six degrees.

The great feat which has thus been accomplished without the aid of artificial training, is a marvellous instance of what human endurance, allied with courage and determination, can effect; though of what particular benefit it may be to the world at large it is utterly impossible to imagine.

Since the preceding account was written, Gale has accomplished a still more extraordinary feat, and one which for strength of will and physical endurance far surpasses his previous efforts. We still fail, however, to see the benefit which can accrue from exhibitions of this kind, and well might he have been contented with the laurels he had already won. He had scarcely allowed himself time to recover from his former task, when he once more appeared at a public place of entertainment, namely the Agricultural Hall at Islington, to walk four thousand quarter-miles under the astounding condition, that it was to be done in four thousand consecutive periods of ten minutes.

This of course deprived him of the half-hour's rest which he could obtain at one time in the former race, and only allowed him a few minutes between each round to get a little sleep. Despite these drawbacks, however, Gale finished his task at eleven o'clock P.M. on the 17th November, after a dreary walk of nearly four weeks. By accomplishing his task, he has placed himself at the head of all the famous pedestrians the world has known; and we trust that this fact will be sufficient to satisfy his craving after what is at best but ephemeral fame.

Men have on many occasions attempted walking feats which required a vast amount of physical endurance, and have failed from their utter inability to go without the natural quantum of sleep; but Gale has not only shewn himself to be possessed of the former, but to be altogether independent of the latter. This, however, instead of indicating 'pluck' merely, would rather seem to point to a peculiarity in the man's constitution; as there are doubtless many persons whose courage would enable them to perform the same or even a greater task if, like Gale, they could walk about in a state of somnolency or semi-sleep—a state in which, to use his own words, he was as one in a dream, unconscious of all that was going on around him, and believing himself to be walking in forests and other places of silvan beauty; and the truth of this was made evident by the fact that he would have often exceeded the limit of his walk had not the voice of his attendant aroused him from his stupor.

The average time occupied by this extraordinary walker was by day about three minutes for each quarter of a mile, and by night about five minutes; and the fastest round recorded was done in two minutes and forty-two seconds. His pulse was always found to indicate a perfect state of health, and was as regular when he left off as when he commenced his task. His food consisted principally of fish, fowl, chops, eggs, and light puddings; and his drink was, with only one exception during the whole time, tea.

Perhaps the most remarkable thing about the whole affair was the fact that, although he sank into a deep sleep directly he reached his chair behind the curtain, which hid him from view between his walks, the moment the bell rang the second time, he would appear as fresh as ever and begin trudging away again.

When the feat was accomplished, Sir John Astley stepped forward, and amid a scene of great enthusiasm, presented the undaunted Welshman with a silver belt of the value of a hundred guineas, bearing the following inscription: 'This belt was presented to WILLIAM GALE of Cardiff, on the 17th November 1877, by some of the nobility and gentry of Great Britain, in commemoration of his hitherto unprecedented feat, namely walking one thousand five hundred miles in one thousand hours at Lillie Bridge Grounds, August 26th to October 6th, 1877; and four thousand quarter-miles in four thousand consecutive periods of ten minutes, at the Agricultural Hall, London, October 21st to November 17th, 1877.' The belt is of lion's skin, mounted on velvet, the metal portion of it weighing one hundred ounces of sterling silver.

None will begrudge Gale his well-earned reward; but it is to be hoped that such exhibitions will in future be discountenanced by the general public, as they not only detract from the dignity of man, but are needless and unwarrantable in a country which, we trust, will ever pride itself on a nobler civilisation than that which is founded upon mere physical endurance.

A DIFFICULT QUESTION.

THE STORY OF TWO CHRISTMAS EVES.

IN TWO CHAPTERS.—PROLOGUE.

IN the gray light of an Indian dawn, with the cool breeze blowing through the curtains of the tent,

and his friend's sorrowful eyes looking down on him, a soldier lay on his rough couch—waiting for death. They were soon to be parted those two, who had lived and fought together; but the face of the one who was starting on that journey of which none has measured the distance, was smilingly calm, while the eyes of the other glistened with regretful tears as he spoke low, faltering, remorseful words.

'Hush, Ralph, hush!' the other said at last. 'Don't you think, dear old fellow, I would sooner lose my life in having saved yours, than in any other way? After all, a few days or years sooner or later, what does it signify? My fate is perhaps the happiest, though I hope it is not. I don't think life is so very desirable,' he continued; 'I am only twenty-six; but mine has not been a happy one. It was my own fault, though. Take my advice, Ralph; don't marry young. There is only one thing that troubles me'——

'Your little girl,' Ralph interrupted. 'Wrayworth, let me take care of her; if I can make her happy, it will be some slight atonement, some'——

'You would take care of her, Ralph? would you?' The dying man's eyes shone gratefully as he looked up in his friend's face. 'She has nothing, poor little thing,' he went on sadly—'motherless, fatherless, scarcely more than a baby either. It would be a heavy charge to leave you, Ralph.'

'Wrayworth! how can you speak so; you will drive me mad! You—you'—— He broke down utterly; it was something so terrible to see this friend dying there—for him. 'Anything on earth that I can do'—— he murmured. {809}

'You will do for her,' said Wrayworth. 'Thank you. I have no friends to send her to. I meant to have made her very happy.'

'She shall be; I swear it!' Ralph answered fervently, thankful for this charge, which might in some degree help him to pay that debt of gratitude, and forgetful that he had no control of fate, that the promise he gave of happiness was a fearfully presumptuous one. But he made it willingly, gladly, solemnly, before God; and as far as lay in his power it should sacredly be kept; any sacrifice he would make for this child.

His friend's eyes rested on him searchingly for a moment. 'I trust you,' he said—'I trust you.'

The hours passed on, the blazing sun arose, and Ralph went out into the burning glare with bent head and staggering footsteps, while words he had heard long since seemed floating round him in letters of fire: 'Greater love hath no man than this, that a man lay down his life for his friend.'—'Is there *none* greater?' he thought. 'Is there nothing *I* can do to repay—nothing?'

CHAPTER I.—ASKED.

The years were well on in their teens since that melancholy scene was enacted in the Indian tent—since Wrayworth consigned his only child to the guardianship of the friend whose life, at the expense of his own, he had saved on the battle-field. A carriage rolled along the snowy high-road through the cold clear air; the short winter's day was drawing to its close, and up in the darkening sky the stars were beginning to shine upon the world's most joyful season, upon Christmas eve. The world's most joyful season? We call it so, this festival, more than eighteen hundred years old; but does the world think it so?—the world, with its thousand cares and crosses, its deep and hidden sorrows, its partings and its tears? Of those amongst the myriads who keep the Yule-tide feast, how many hold it with a chastened joy! For on that day most of all our thoughts go back to other years, to other faces, to other lips that have wished us 'a merry Christmas;' to other hands, which have clasped ours so loyally, to those who have loved us so long ago!

But Major Loraine had no sad memories connected with the season as he drove up to the old house, from which duty had so frequently called him, and which he had not seen for five years. In the wide, dark, panelled hall his step-mother stood waiting to welcome him, as gladly as though he had been her own son. He was only a boy when she first came there, when the pink was fresh on her cheek and the gold bright in her hair; they had been drawn to each other then; and through the long years of her widowhood his loving care had helped to lighten her load of sorrow; so it was not wonderful that for months past she had been eagerly looking forward to his return.

The greetings over, they sat down side by side, talking, as those talk after long separation, of past, present, and future; of their acquaintances married, dead, or far away; of things on the estate, prosperous or failures; of the ball to be given next month, of the one they were going to, to-night; of how much Emma was improved since she 'came out,' how Katharine was considered one of the handsomest girls in the place, and how she might marry Sir Michael Leyland with thirty thousand a year if she liked.

'But why ever doesn't she like?' asked the Major, astonished at this new phase in the character of his worldly-minded sister.

'That is just what troubles me,' answered Mrs Loraine. 'They are all at the church now, helping to decorate. Louise wanted to stay at home to welcome you, but I sent them all off, so as to have you to myself for an hour. You will see a great alteration in Louise, Ralph.'

'Shall I, mother?' he said smiling. 'I think not. Her letters are the same always; they have altered in style a little of course in the last year or two, but it is the same spirit—the same creature.'

'But not the same face, Ralph. Remember you have not seen her for five years, which have not altered you, but which have changed her from an unformed girl of fourteen to a lovely woman;

with that bright changing beauty, which has more charm for a man than regularity of feature. It is a very difficult question.'

'What is a difficult question?' asked Ralph, as his mother paused.

'What to do with Louise.'

'You hinted something of the kind in your last letter, mother,' he said gravely. 'I am sorry, but I must confess this house seems large enough for four women. You know how I am situated; you know the promise which binds me. But tell me,' he added smiling, 'what has Louise done? She seemed to me gentle and tractable enough when I was last at home.'

'I have not the slightest fault to find,' Mrs Loraine replied; 'you know I am very fond of her. You will think my difficulty very womanish; simply, Louise is too pretty.'

'And some one has told her so,' said Ralph, laughing. 'Go on.'

'It is not that; but I cannot bear to see my own child's happiness destroyed by another, who, if not a stranger, has at least no claim upon her.'

Ralph frowned slightly. 'Perhaps not,' he answered; 'the claim is upon me, and it is a sacred one. So,' he continued, 'it is a case of rivals, I see.'

'Simply this, Ralph. You remember the Levesons of Leigh Court, where we are going to-night? Their eldest son is in the —th Dragoons, and has been home on leave. Louise was away when he first came here, and he appeared very much struck with Katharine; and no wonder; she is very handsome. Well—don't laugh at me; I don't like match-making as a rule; but I thought as she seemed interested in him, there was no harm in inviting him sometimes. But as soon as Louise came home, he transferred his attentions to her. Katharine says nothing; but it makes a kind of awkwardness between them. I know she feels it, poor child; though indeed I believe Vere Leveson is simply flirting with Louise.'

Major Loraine laughed. 'Poor mother!' he said, 'you will have enough to do if you take all your children's love affairs to heart so seriously. These things always right themselves, you know. But I confess I am surprised to hear of Katharine going in for sentiment; I should have thought Sir Michael more in her line. Is that all, mother?'

'No; only the first of my difficulties,' she answered half sadly. 'You know what my health has been for the last few years; you know—— Well, you do not wish me to speak of that; but it is better to look in the face of possibility. Suppose anything happened to me, Ralph, what would become of Louise?' {810}

'You speak of what I hope may be far distant, mother,' he answered tenderly. 'But why should you be uneasy about her? In the event of her not marrying, she would always have a home here with me.'

Mrs Loraine shook her head. 'Turn round and look in the glass,' she said; 'thirty-nine is not such a very formidable age.'

He turned, and contemplated his bronzed face in the glass; such a handsome, noble face, telling of a nature that could not act falsely or meanly. The broad square forehead, marred by a sabre-cut, and the dark hair flecked here and there, by the Indian sun, with gray; nothing else to find fault with in the frank kind smile, the fine regular features, the dark true eyes.

'I think there is no fear of my being taken for younger than I am, mother,' he said, smiling.

'It is an awkward position for you, though,' she answered; 'and as I said, a difficult question what to do. We must hope for the best, Ralph. You are going to join the others now, I suppose?'

'Yes; I think I can find my way.'

He went out into the keen frosty air, walking slowly, though it was unpleasantly cold to one accustomed to tropical climates. He was thinking over his mother's words, and knew she was right as to the awkwardness of the position. He saw the peace of the household was troubled, without knowing how to set matters right, and he thought of the old friend who had trusted his child to him. He had vowed she should be happy, and now it seemed a difficult vow to keep; but for the sake of the man who had died for him sixteen long years ago, the pledge then given must be redeemed.

Louise Wrayworth's life had been a bright one hitherto; her guardian's home was the only one she could remember, and he had striven to fill in some degree her father's place. To him, from infancy to womanhood, she had looked up with loving grateful reverence, regarding him, present or absent, as the noblest of created beings.

He reached the old church, and made his way round to the open vestry door. The steps were encumbered with bundles of evergreens; the voices of the workers, who had finished their task, were audible. He pushed the door further open, and went in. The floor was covered with boughs, and around the pillars were wreathed holly and other evergreens in honour of the joyous season. Some of the choristers stood waiting for the choir-practice, and the organist was softly playing *Adeste Fideles*.

'Ralph!' cried a young fresh voice; and a slight fair girl with a merry face sprang up from the floor, with her hands full of the scarlet berries, which fell hither and thither in bright-hued rain, as with complete indifference to the by-standers, she gave the returned soldier a sisterly embrace. 'You dear old thing to come for us!' she exclaimed.

'Emma, Emma!' exclaimed Ralph, laughing and disengaging himself; 'you have not learned to

behave any better in five years.'

But his young sister had vanished, and he turned to greet the vicar; and one or two of the ladies he recognised. In a few minutes Emma reappeared; and behind her came a tall fair girl with masses of golden hair, and great beautiful cold blue eyes. She greeted Major Loraine affectionately, but with the quiet stately grace habitual to her. Five years had not changed Katharine Loraine; at twenty-four she was still the same majestic Queen Katharine as at nineteen, with whom he had always had so little sympathy, whose nature he had found so difficult to understand.

'Where is Louise?' he asked presently. 'Is she not here?'

'She went into the churchyard just now,' answered Emma, 'to put a wreath on Nellie Bryant's grave. You remember her, Ralph?'

'Louise's friend? Yes.'

'A *triste* employment for Christmas eve,' observed one of the gentlemen decorators to Katharine, as he stooped to disentangle her dress from a long sprig of ivy.

'Oh, Mr Leveson went to hold a lantern for her,' Katharine answered, with the slightest possible shade of contempt in the silvery tones of her voice; 'and Louise is never *triste*, unless she is by herself.'

The choir was now fully assembled; the organist struck up the anthem, the rest were silent to listen, and Ralph Loraine went out to look for his ward. He came round the east end of the old church, and stood still for a moment in the shadow. There were two people standing at the edge of the path, looking down on the grave at their feet, where the lantern's light shewed the shining holly upon the upright marble cross. It shewed too the face of his friend's child; a beautiful face, as his step-mother had said, with large dark eyes and wavy dusky hair, a clear delicate complexion with a little rose-flush on the cheeks, and full red lips half-parted by the sweetest smile he had ever seen; with the same erect carriage of the head, the same fearless straight regard which had characterised her father.

It was so strange to see her there a woman, whom he had left a mere girl; and as he looked on the fair face, something seemed to whisper that the ideal beauty he had so often dreamed of was before him at last. They moved away, and came slowly nearer, and paused again where he could see her companion; and for a moment he almost hated the man for his youth, and his handsome face, and the deep-blue eyes aflame with passion-fire as they rested on the child of his dead friend; and another whisper which silenced the first, told him how fitted was each for the other.

'If *I* were lying there,' said Vere Leveson, and Ralph could hear every one of the foolish, softly spoken words, 'would you ever make wreaths for *me*, I wonder?'

'I don't know.'

'Don't you? I wish you did; for I thought just now I should be glad to be lying there, if you would remember me.'

Ralph had heard enough, and tried to slip away unseen; but the gravel crunched under his feet and betrayed him.

Louise started, and a bright vivid blush covered her face as she sprang forward. 'Lorrie! Oh, how glad I am to see you again!' she cried, as she took both his hands in hers and lifted her cheek for his kiss. {811}

He felt half sorry she had done so; that and the old childish name put him immediately in his place as guardian, and made him ashamed of his thoughts. 'How you are altered, Louise!' he said, looking down at her admiringly. 'I think I should hardly have known you!'

'I should have known you, Lorrie, anywhere,' she said reproachfully.

'That is rather different,' he said; 'when we once get old, we don't change so quickly.'

'You would not like it if I said you were old, Lorrie. But tell me, am *I* altered for the worse? or'——

'You have no need to come to me for compliments, surely,' he said smiling.

'I should think more of yours than of any one's,' she whispered, with that sweet dangerous smile; a smile which a man like Ralph Loraine should have taken as a warning not to feel its influence too often.

'How rude I am!' she said at last.—'Mr Leveson, do you know my guardian?' She turned to her companion, who stood holding the lantern a few yards from them.

'I had the honour of dining in your company once, Major Loraine,' he answered, stepping forward. 'It is some time ago, when I first joined at Madras; but I well remember my anxiety to see such a distinguished soldier as yourself.'

There was a ring of truth and honest admiration in the words, which raised them above an ordinary compliment, and which made Ralph hold out his hand and answer cordially: 'I have a bad memory for faces, or I think I should have remembered yours.'

'Thanks,' said Vere, laughing. 'We shall have the pleasure of seeing you to-night, I hope?'

'Yes; my mother told me of the invitation.'

'Of course he is coming,' said Louise. 'And you will dance with me all the evening, Lorrie; won't you?'

'Not quite all, Miss Wrayworth; please, don't forget my waltzes,' said Vere, holding out his hand. 'I must be off now; so good-bye for the present. You won't forget?'

She looked up quickly. 'Perhaps,' the lips said laughingly; but the dark eyes gave a sweet silent answer Ralph did not see, though he was watching them. But after Vere Leveson had gone, he walked home beneath the Christmas stars, with Louise's hand resting on his arm, dreaming as he went, a fair, fond, foolish dream.

The Christmas-eve ball at Leigh Park was a regular institution, one which Sir Harry Leveson had kept up for years. It was a pretty sight, Ralph thought, as he stood leaning against a window, and looking round to select a partner. And amongst all the fair women, the one he thought the fairest was his young ward Louise Wrayworth, in her white floating dress, with its wreaths of holly, and the red clustering berries in her dark hair.

Ralph had been watching Vere Leveson, trying to decide in his own mind whether Mrs Loraine's verdict of flirtation was a just one; and he judged that it was; for the attentions of the young officer were apparently equally divided between Louise and Katharine. Ralph did not happen to be near when, later on, he led Louise to one of the cool empty rooms, where through the open window could be heard the merry Christmas bells. He did not see the hand-clasp or the light that flashed in the eyes of each. He did not hear the hurried whisper: 'Louise, you won't forget me, you will trust me till next Christmas-time?'

The ball was over, the rooms were dark and silent; the whole world waited for the sun to rise on Christmas-day.

IS THE TELEPHONE A PRACTICAL SUCCESS?

In September last appeared in this *Journal* an article entitled 'Singing and Talking by Telegraph;' and in that paper we attempted to describe the mechanism of that wonderful little instrument the telephone. It is now our purpose to say something regarding the progress that has been made towards perfecting the invention; but in order to make the article as clear as possible, we venture once more upon a few words explanatory of the instrument.

The telephone as it is now made is an exceedingly simple-looking apparatus similar in appearance to a stethoscope; to the handle of a girl's skipping-rope; or better still, to a large-sized penny wooden trumpet. Inside this hollow cylinder, and within an inch or so of the wider end, is fixed a plate of iron as thin as a well-worn sixpence, and about the size of a half-crown piece. This is called the diaphragm. Behind the diaphragm, nearly touching it, and extending to the narrower end of the cylinder, is a piece of 'soft' iron enveloped in wire coils, with a permanent magnet beyond. Outside the narrower end of the cylinder, and communicating with the coils that surround the iron inside, are attached two screws or 'terminals,' which are 'joined up' to a main wire, communicating with the distant or receiving telephone wherever that may be, and which is precisely similar to the one we have described. When we apply our mouth to the bell-shaped end of the apparatus, and speak or shout or sing, we set the diaphragm vibrating as in a tuning-fork; the vibrations thus created are electrically communicated through the wire to a distant telephone, and are repeated on its diaphragm with more or less distinctness.

It is known that the motion of an iron plate contiguous to the poles of a magnet creates a disturbance of electricity in coils surrounding those poles; and the duration of this current will coincide with the vibratory motion of the plate or diaphragm. When, therefore, the human voice (or any other suitable sound) impinges through the tube against this diaphragm, the diaphragm begins to vibrate, and awakens, so to speak, electrical action in the coils of wire surrounding the poles of the magnet; not a current, but a series of undulations, something like those produced by the voice in the air around us. In short the telephone is an apparatus designed to transmit sound through a wire of indefinite length; the voice being, so to speak, 'converted into electricity at one end, the electricity becoming voice at the other.' {812}

With these few explanatory remarks, we now proceed to offer to our readers the following interesting experiments made by a gentleman well skilled in telegraphy.

'Journalists,' he says, 'with no special knowledge of the difficulties the invention has to encounter as a telegraph instrument, have expatiated in such enthusiastic terms upon the results said to have been achieved by the telephone, that a somewhat exaggerated notion of its powers and capabilities has been accepted by the general public. It appears, therefore, to the writer of those lines that a statement of the experiences of a person practically engaged in the work of telegraphy may assist in placing the phenomena of the telephone on a proper footing.

'Scientifically, the telephone is a great and undoubted success; and a person would be grievously in error if, because of some undoubted hindrances to its practical use, he pronounced it unworthy of further experiment. The emergence of telegraphy from the domain of experiment into that of daily practical use is a fact so undoubted, and one with which we are now so familiar, that it is impossible to say at what moment the telephone, at present a scientific toy, may become a daily necessity not only of telegraphic but of ordinary commercial work.

'Being engaged in daily contact with a large telegraphic centre, and in association with men who have the command of every means of testing the invention in a practical work-a-day manner, the

writer was able to gauge pretty accurately the range within which the telephone can work. It must be understood, however, that in recording the effects observed by him and his associates, he has no desire to invalidate, or even to call in question the experiences of others who may have been able to arrive at better results. The telephone is in the hands of some of the first electricians and telegraphists of the day, and differences of conditions (not to speak of differences of capacity on the part of the operator) may give variety in the observations made. The very difficulties and drawbacks now to be recorded will no doubt some day suggest to a master-mind the method by which they may be overcome. But till that day arrives, the telephone must be content to remain where the writer leaves it, an undoubted success from a scientific point of view, but overwhelmed with obstacles to its practical use, in this country at least, in general telegraphy.

'When a telegraphist first gets into his hand this beautifully simple and electrically delicate instrument, his first inclination is to test its carrying-power. This is of course a closet experiment, not working with actual telegraph line, but with "resistance" equivalent to a telegraph line of stated length. An experiment of this nature gives better results than could be obtained by a veritable line, because the insulation is, so to speak, perfect. No leakage at undesigned points of contact, or disturbance from unfavourable atmospheric conditions, is felt, and the experiment is entirely under the observer's control. The apparatus used is designed to offer the same labour for the electric current to overcome, as would be offered by a stated length of outside telegraph line. This artificial resistance is nicely graduated, and as the method of testing was suggested by Ohm, a German electrician, the unit of resistance is, as we once previously explained, termed an "ohm." Removing the telephone to such a distance that the two observers were "out of earshot," the test with resistance was tried, and with a resistance of one thousand ohms—roughly speaking, equal to seventy miles of a well-constructed line—the sound was perfect, although not very loud. Every articulation of the speaker at the other end could be distinguished so long as silence was maintained in the room, or so long as no heavy lorry rumbling over the stones outside sent in harsh noises which drowned the faint whisper of the instrument. The resistance was gradually raised to four thousand ohms—nearly three hundred miles—with like favourable results; and for some little distance beyond, articulation could still be made out. But by the time ten thousand ohms had been applied, putting the speaker at a distance of, say, seven hundred miles, sound only, but not articulate sound, reached the ear. The tone was there, and every inflection of the voice could be followed; but articulation was absent, although the listener strove every nerve to catch the sound, which the speaker, as was afterwards ascertained, was shouting in a loud clear voice. The prolonged notes of an air sung could be heard with the resistance named, but again no words could be distinguished. The voice, whether in speaking or singing, has a weird curious sound in the telephone. It is in a measure ventriloqual in character; and with the telephone held an inch or two from the ear, it has the effect as if some one were singing far off in the building, or the sound were coming up from a vaulted cellar or through a massive stone wall.

'Proceeding to our next experiment, we joined up the telephones in one office to several wires in succession, putting ourselves in circuit with lines going to various distances and working with different instruments. When this was done, the real obstacle to telephonic progress at once asserted itself in the shape of "induction." The first wire experimented with was partly "overhouse" and partly underground, and the offices upon it were working Wheatstone A B C instruments. It is difficult to render clear to the person ignorant of telegraphic phenomena the idea expressed by the word *induction*. Briefly it may be put thus, that when a strong electric current is passing on a wire, it has the faculty of setting up a current of opposite character in any wire not then working, or working with a feebler current, that may be in its vicinity. The why or the wherefore cannot be explained, but there is the fact.

'In various recent articles on the telephone, mention has been made of "contact" as the cause of disturbance. This word, however, although it has been used by telegraphists, is misleading, and can only be used as an endeavour to express popularly an electric fact. Actual contact of one wire with another would spoil the business altogether. A wire bearing an electric current seems to be for the time surrounded, to an undefined distance, by an electric atmosphere, and all wires coming within this atmosphere have a current in an opposite direction set up in them. This is as near an explanation of the phenomena of induction as the state of telegraph science at present affords. Now the telephone works with a very delicate magnetic current, and is easily overpowered by the action of a stronger current in any wire near which the telephone wire may come. To work properly it "requires a silent line."

'In the place where the observations were made, there are a large number of wires, travelling under the floor, through the test-box, along passages to the battery-room and to a pole on the outside, whence they radiate, or out to a pipe underground, where many gutta-percha-covered wires lie side by side. On applying the ear to a telephone joined into a circuit working in such an office a curious sound is heard, comparable most nearly to the sound of a pot boiling. But the practised ear could soon separate the boiling into distinct sounds. There was one masterful Morse instrument—probably on the wire lying nearest the one on which we were joined up—whose peremptory "click, cli-i-i-ck, click," representing "dot, dash, dot" on the printed slip we read from, could be heard over all. Then there was the rapid whir of a Wheatstone fast-speed transmitter, sending dots and dashes at express speed by mechanical means; the sharp well-pronounced rattle in sounds of equal length of a needle instrument; and most curious of all, the "rrrrr-op, rr-op, rrrrrrrrrrrr-op, rrrrr-op, rr-op" of the A B C, the deadliest foe to the telephone in its endeavours to gain admission into the family of telegraph instruments. There may be reason in this, for as the Wheatstone A B C is the instrument used for private telegraphy, or for the least important public offices, because it requires no "code" to be learned by the manipulator, so it would likely be the first to be displaced if an acoustic telegraph permanently took the field. So

the sentient little A B C opens its mitrailleuse fire on the intruder, on whose delicate currents, in the words of an accomplished electrician, it plays "old harry." The peculiar character of the sounds we borrow on the telephone from this instrument arises from the fact that as the needle flies round the dial, a distinct current or pulsation passes for each letter, and the final "op" we have tried to represent shews the stoppage of the needle at the letters as words were spelled out.

'It must not be understood that the *sounds* of those various instruments are actually heard in the telephone. What happens is, that the currents stealing along the telephone wire by induction produce vibrations in the diaphragm of that instrument, the little metal membrane working on the magnet in ready response to every current set up in the latter. When it is remembered that the principle of the telephone is that the sound-caused vibrations in the filmy diaphragm at one end create similar but magnetically-caused vibrations in the diaphragm at the other end, and so reproduce the sound, it will be obvious why the rapid roll of the A B C currents, or the swift sending of the fast-speed transmitter, when brought by induction into the telephone wire, cause disturbances in the sound vibrations, and thereby cripple the instrument. One instrument of either kind named would have a certain effect, but one Morse or single needle would not have any greatly prejudicial effect. But a number of Morses or needles going together, such as were heard in our experiments, would combine to be nearly as bad as one A B C or fast-speed Morse. So delicate is the diaphragm to sound (and necessarily so), that in all experiments with the telephone itself, such as those with "resistance," or those made at home to test the instrument apart from telegraphic considerations, every sound from without broke in, giving an effect like the well-known "murmur of the shell."

'Joining up our wire now to a more distant station at some miles along the railway, and having on its poles a number of what are known as "heavy" circuits, the pot-boiling sound assumed even more marked characteristics. The A B C no longer affected us; but a number of Morse instruments were in full gear, and the fast-speed transmitter was also at work. While we were listening, the circuit to which we were joined began to work, and the effect was literally electrical. Hitherto we had only borrowed currents—or, seeing they were so unwelcome, we might call them currents thrust upon us—and the sounds, though sharp and incessant, were gentle and rather low. But when the strong current was set up in the wire itself, the listener who held one of our telephones nearly jumped from the floor when an angry "pit-*pat*, pit-*pat*, pit-*pat*-pit" assailed his ear, causing him to drop the instrument as if he had been shot! It was a result none of us had expected, for it did not seem possible that the delicate metal diaphragm and the little magnet of the telephone could produce a sound so intense. Of course it was only intense when the ear was held close to the orifice of the instrument. Held in the hand away from the ear, the telephone now made a first-rate "sounder," and we could tell without difficulty not only the signals that were passing, but found in it a more comfortable tone than that given by the Morse sounder in common use.

'Other experiments of a like character led to results so similar, that they may be left unnoticed; and we proceed now to describe one of a different character, designed to test the telephone itself. At a distance of about half a mile, access was obtained to a Morse instrument in private use, and joined to the office by "overhouse" wire. Dividing our party and arranging a programme of operations, two remained with a telephone in the office, while other two, of whom the writer was one, proceeded with the second telephone to the distant instrument. By an arrangement which a practical telegraphist will understand, the key of the Morse was kept in circuit, so that signals could be exchanged in that way. It may be noticed, however, that this was hardly necessary, as the diaphragm of the telephone can be used as a key, with the finger or a blunt point, so that dot and dash signals are interchangeable, should the voice fail to be heard. As the wire in this instance travelled almost alone over part of its course, we were in hopes that induced currents would be conspicuous by their absence. In this we were, however, disappointed, for the pot was boiling away, rather more faintly, but with the "plop-plop-plop" distinctly audible, and once more a sharp masterful Morse click was heard coming in now and again. The deadly A B C was, however, absent, so that our experiment proved highly successful. For some reason or another—probably an imperfect condition of the wire, or the effects of "induction" over and above what made itself audible to us—the spoken sounds were deficient in distinctness; but songs sung at either end were very beautifully heard, and indeed the sustained note of sung words had always a better carrying-power than rapidly spoken words. Every syllable, and every turn of melody of such a song as *My Mother bids me bind my Hair*, sung by a lady at one end, or *When the Heart of a Man*, sung at the other, could be distinctly heard, but with the effect before noticed, that the voice was muffled or shut in, as if the singer were in a cellar, while it was not always possible to say at once whether the voice was that of a man or a woman.

'In the course of some domestic experiments, it was remarked that in playing the scale downwards from C in alt. on the piano, the result to the listener was a "tit" only for the four upper notes, although all below that had a clear "ting," and the octaves below were mostly distinct, although at the low notes of the piano the sound was again lost. The ringing notes of a musical box were not so successful, but with close attention, its rapid execution of *Tommy Dodd* could be well enough made out. An endeavour was made to catch the ticking of a watch, but this was not successful, and the experiment is not recommended, as the near presence of a watch to a magnet is not desirable; and the watch exposed to it in this instance was, it is thought, affected for a short time thereafter, although it received no permanent damage.

'The observations made in the course of these experiments convinced those present that the telephone presents facilities for the dangerous practice of "tapping the wires," which may make it useful or dangerous, according as it is used for proper or improper purposes. It might be an

important addition for a military commander to make to his flying cavalry; as an expert sound-reader, accompanying a column sent to cut off the enemy's telegraph connections, might precede the act of destruction by robbing him of some of his secrets. The rapidity and simplicity of the means by which a wire could be "milked," without being cut or put out of circuit, struck the whole of the party engaged in the various trials that are described above. Of course the process of tapping by telephone could not be carried out if the instrument in use was an A B C or single needle, or if the wire was being worked duplex or with a fast-speed Morse, for in these cases the sounds are too rapid or too indefinite to be read by ear. The danger is thus limited to ordinary sounder or Morse telegraphs; but these still form the mainstay of every public system.

'Since the trials above described were made, the newspapers have recorded a beautiful application by Sir William Thomson, of the electric part of the telephone to exhibit at a distance the motions of an anemometer; the object being to shew the force of air-currents in coal-mines. This is a useful application of an electric fact, and doubtless points the way to further discoveries. But it is to be noticed that the experiment, interesting as it is, hardly comes under the head of a tele*phone*, what is reproduced at a distance being not sound but motion.

'Obviously the invention cannot rest where it is; and no one more readily than the practical telegraphist will welcome an instrument at once simple, direct, and reliable. Even in its present form the telephone may be successfully used where its wire is absolutely *isolated* from all other telegraph wires. But the general impression is that its power of reproducing the sound must be intensified before its use can become general even as a substitute in works or offices for the speaking-tube.'

SINGING MICE.

These interesting animals are said to be smaller than ordinary mice, to be usually of a brownish colour, and to have long ears. Naturalists have not come to any exact reason as to why they sing. Some persons impute the singing to disease, as in the wheezing of any one from a cold. Others attribute it to an internal parasite. But these seem unsatisfactory explanations; for when the little creatures sing they are as lively as common domestic mice. The faculty of singing in a small way with various modulations appears to be quite natural to the animals. It has been noticed that during their musical performances there is a throbbing in the throat, and that the snout is elevated in giving play to the voice, as in the warbling of birds. The song or warble of these mice is said to be sweet and varied. Hitherto not much attention has been given by zoologists to the phenomenon; but we observe by various notices in *Land and Water* and in *Nature*, two periodicals devoted to pleasant discussions on subjects of natural history, &c., that singing mice are becoming objects of careful investigation.

An amusing account of a singing mouse appears in *Nature*, Nov. 9, from the pen of Mr Joseph Sidebotham, dating from Menton, south of France.

'Last winter we occupied the rooms we now do at Menton. Early in February we heard as we thought the song of a canary, and fancied it was outside our balcony; however, we soon discovered that the singing was in our *salon*, and that the songster was a mouse. At that time the weather was rather cold, and we had a little fire, and the mouse spent most of the day under the fender, where we kept it supplied with bits of biscuit. In a few days it became quite tame, and would come on the hearth in an evening and sing for several hours. Sometimes it would climb up the chiffonier and ascend a vase of flowers to drink at the water, and then sit and sing on the edge of the table and allow us to go quite near to it without ceasing its warble. One of its favourite haunts was the wood-basket, and it would often sit and sing on the edge of it. On February 12, the last night of the Carnival, we had a number of friends in our *salon*, and the little mouse sang most vigorously, much to their delight and astonishment, and was not in the least disturbed by the talking. In the evening the mouse would often run about the room and under the door into the corridor and adjoining rooms, and then return to its own hearth. After amusing us for nearly a month, it disappeared; and we suspect it was caught in a trap set in one of the rooms beyond. The mouse was small and had very large ears, which it moved about much whilst singing. The song was not unlike that of the canary in many of its trills, and it sang quite as beautifully as any canary, but it had more variety, and some of its notes were much lower, more like those of the bullfinch. One great peculiarity was a sort of double song, which we had now and then—an air with an accompaniment. The air was loud and full, the notes being low and the accompaniment quite subdued. Some of our party were sure that there was more than one mouse, until we had the performance from the edge of the wood-basket and were within a yard or two of it. My son has suggested that many or all mice may have the same power, but that the notes are usually so much higher in the scale that, like the cry of the dormouse and the bat, they are at the verge of the pitch to which the human ear is sensitive. This may be so; but the notes of our mouse were so low, and even the highest so far within the limits of the human ear, that I am inclined to think the gift of singing in mice is but of very rare occurrence.'

In the same periodical, the following additional particulars as regards singing mice are presented by Mr George J. Romanes, Regent's Park.

'Several years ago I received some of these animals from a friend, and kept them in confinement for one or two months. The description which your correspondent gives of their performance leaves very little to be added by me, as in all respects this description agrees perfectly with my

own observations. I write, however, to remark one curious fact about the singing of these mice, namely, that it seemed to be evoked by two very opposite sets of conditions. When undisturbed, the little animals used for the most part to remain quiet during the day, and begin to sing at night; but if at any time they were alarmed, by handling them or otherwise, whether during the day or night, they were sure to sing vigorously. Thus the action seemed to be occasioned either by contentment or by fear. The character of the song, however, was slightly different in the two cases.

'That these mice did not learn this art from singing birds there can be no doubt, for they were captured in a house where no such birds were kept. It may be worth while to add that this house (a London one) seemed to have been suddenly invaded, so to speak, by a number of these animals, for although my friend has lived in this house since the year 1862, it was only during a few months that singing mice were heard in it, and during these few months they were heard in considerable numbers.'

As corroborative of the foregoing notices, we give the following very interesting account of a singing mouse, obligingly sent to us by a correspondent, Mr Alfred Wright.

'In the early spring of last year I was invited by an old widow lady to see a singing mouse, which she had at night heard singing and scratching beneath the floor of her bed, and been so fortunate as to catch in a trap. I went, and found the little animal in a cage with a revolving wheel, similar to that in which a squirrel is usually confined. Whether the mouse was shy at the presence of a stranger, I do not know. It remained silent; but at length, after my patience had been nearly exhausted, it began to sing in clear warbling notes like those of a bird. When I called the next evening to hear the mouse again, I heard him to perfection; and was so filled with interest in the novelty, that I begged permission to bring any friend who was a sceptic of the fact, or who might desire to see the phenomenon. My request was readily granted. One friend of course had heard of a singing mouse, but he certainly would not allow that a prolonged squeak was a song—not he! Another friend of course had heard a mouse sing when he was a boy; but he was told, he perfectly well remembered, that the *noise* produced by the mouse was the result of some internal disease. Well, both of these went with me to hear the little creature. Unfortunately, at first it was again shy; but after an interval of silence it commenced to sing—sweetly, like the low notes, the jug, of the nightingale. My friends had come, had heard, and were conquered! The one acknowledged it was really a song and not a squeak; the other, that the noise was certainly dulcet; but still he thought it possibly might be the result of disease, and not natural to the little animal. We suggested that this wonderful natural curiosity (as we deemed it) should be sent to an eminent naturalist who resided near. Great, therefore, was my astonishment and pleasure when it was presented to me, who could only treat it like a schoolboy would his white mouse—as a pet. And truly it became a great pet to both my wife and myself.

'In form, the singing mouse did not differ from his humbler brethren; but in colour he was of a darkish brown, and had very bright eyes. It soon became used to the presence of my wife, and sang constantly while revolving the wheel of his cage. The notes proceeded from the throat. He became exceedingly gentle, and was pleased at being caressed.

'I deemed him so rare a curiosity that I ventured to offer to exhibit him to the distinguished naturalist referred to above, and in my letter described the little creature and its peculiarities, as I have done here. The naturalist most courteously replied: "The case of the singing mouse is very extraordinary, but the fact is now well established.... The best account which has ever been published is by an American naturalist, and I have given an abstract of his account in my *Descent of Man*.

"The American referred to is the Rev. S. Lockwood, author of *The American Naturalist*, and he gives an account of his observations of the *Hesperomys cognatus*, an American species, belonging to a genus distinct from that of the English mouse. This little animal gave two chief songs. Mr Lockwood gives both songs in musical notation; and adds, that though this mouse 'had no ear for time,' yet she would keep to the key of B (two flats) and strictly in the major key.... Her soft clear voice falls an octave with all the precision possible; then at the wind up it rises again into a very quick trill in C sharp and D." I have made this quotation, as it far better describes the peculiar qualifications of a singing mouse, than my inexperienced observations could announce.

'My mouse remained in contented confinement upwards of a year, feeding upon a little sopped bread and canary-seed; and great was the grief of my wife (who was his keeper) and myself when he was found dead in his little nest. During the previous evening he had been heard singing with more than usual ardour.'

We shall probably return to this interesting subject.

USING UP WASTE SUBSTANCES.

The subject denoted by the above title, more than once treated in the *Journal*, is adverted to by an obliging Lancashire correspondent who, surrounded by one of the busiest and most ingenious clusters of townsmen in England, has had his attention drawn to various substances waiting (as it were), for application to useful purposes. His suggestions are not wholly new, having to some extent been already anticipated; but they are sufficiently valuable to call for notice here.

One relates to the waste that presents itself in the processes of manufacturing cotton. A residue

known technically as *willowings*, that falls into a receptacle during the preparatory beating and disentangling of raw cotton-wool, consists of a dusty heap of seed-husks and short broken fibres. It is used by farmers to absorb the liquid manure of their cowsheds and middens or dung-heaps. Although some of the cottony fibre may be separated through a sieve, so much adheres to the seed-husk as to render it unsuitable for paper-making, for which it has often been tried. The suggestion now made is, that though unfitted for paper, this refuse may possibly be found useful in the manufacture of *millboard*. Large quantities of this tough and durable product are employed for bookbinding, for making the discs of railway wheels, &c.; and as colour is not a matter of moment, the idea is that the mingled residue of cottony fibre and seed-husk might be rendered available. It is known that millboard made from wood-pulp is imported to a considerable extent from abroad; and we are told that 'a large portion of the private income of the great German Chancellor Prince Bismarck is derived from the manufacture of wood-millboard on his Varzin estate.' Many hundred tons of willowings could be obtained in Lancashire at a very cheap rate, even as low as two shillings per hundredweight.

Another suggestion bears relation to the utilisation of refuse from the manufacture of prussiate of potash, a most valuable product in the hands of the manufacturing chemist. The prussiate is obtained in large ratio from woollen rags, after the separation of all the pieces that can be worked up into shoddy for cheap cloth. The refuse is calcined in cast-iron retorts, lixiviated with water, and drained off for subsequent treatment: leaving behind it a thick black sediment of impure animal charcoal. The suggestion relates to the application of this residue to the manufacture of blacking—a humble but valuable agent for those who appreciate tidiness in the appearance of boots and shoes and economy in the preservation of leather. If useful for this purpose, it might be found advantageous and economical as an ingredient in printers' ink. Whether this carbon residue is at present applied to any other useful purpose, we are not fully informed.

A third suggestion relates to the preparation of animal size for the carpet-manufacture and for that of many kinds of woollen and worsted goods. This size is made from the clippings and scrapings of skins and hides, from rejected scraps of parchment and vellum, and from the worn-out buffalo skin pickers and skips largely used in textile manufactures; also from the pith of cattle-horns, which contain a large amount of valuable gelatine. The suggestion is, to utilise the refuse left after making this size. One large carpet factory in Yorkshire rejects as utterly useless a ton or more of this refuse every week. The horn-pith contains as one of its components phosphate of lime, and is on that account recommended to the notice of the manufacturers of chemical manures on a large scale.

One more suggestion comes from our ingenious correspondent. Old corks are applicable to a greater number of purposes than we are generally in the habit of supposing. That many of them are ground up to make cork-stuffing for cushions, padding, &c. is well known; but there are other uses for them as corks or half corks, besides making floating buoys and life-preservers. A taverner in a Lancashire town covered the floor of his lobby and bar with very open rope-matting, and filled up the openings with old corks cut down to the level of the surface of the mats. This combination is found to be almost indestructible under the feet; while it gives a good grip or foothold. As the making of rope-mats is one of the trades carried on in reformatories and some other large establishments, it is suggested that the managers should take into consideration the feasibility of adding old corks to their store of manufacturing materials.

As this *Journal* finds its way into every corner of the busy hives of industry, it may possibly be that some of our readers are already acquainted with such applications of waste refuse to useful purposes as those which our esteemed correspondent suggests. But this is a point of minor importance. The primary question is, not whether an idea is absolutely new, but whether it is practicably susceptible of useful application. The history of manufactures teaches us that apparently humble trifles like these have proved to be worth millions sterling to the country.

LET BYGONES BE BYGONES.

Let bygones be bygones; if bygones were clouded
   By aught that occasioned a pang of regret,
Oh, let them in darkest oblivion be shrouded;
   'Tis wise and 'tis kind to forgive and forget.

Let bygones be bygones, and good be extracted
   From ill over which it is folly to fret;
The wisest of mortals have foolishly acted—
   The kindest are those who forgive and forget.

Let bygones be bygones; oh, cherish no longer
   The thought that the sun of Affection has set;
Eclipsed for a moment, its rays will be stronger,
   If you, like a Christian, forgive and forget.

Let bygones be bygones; your heart will be lighter,
   When kindness of yours with reception has met;

The flame of your love will be purer and brighter
If, Godlike, you strive to forgive and forget.

Let bygones be bygones; oh, purge out the leaven
Of malice, and try an example to set
To others, who craving the mercy of heaven,
Are sadly too slow to forgive and forget.

Let bygones be bygones; remember how deeply
To heaven's forbearance we all are in debt;
They value God's infinite goodness too cheaply
Who heed not the precept, 'Forgive and forget.'

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