

wheel turns round freely within it, fresh portions of its circumference coming continually into relation with the coil. The part of the wheel in immediate contact with the rail is thus made magnetic, and therefore has a strong adhesion for the surface along which it moves—and the amount of the adhesion may be increased or diminished at any time, by merely augmenting or reducing the intensity of the galvanic current that circulates through the surrounding coil. By means of a handle the electricity may be turned on or off, and an effectual break be thus brought into activity that can make the iron rail smooth or adhesive according to the requirements of the instant, and this without in any way interfering with the free rotation of the wheels as the friction-breaks of necessity do. Increased adhesion is effected by augmented pressure but the pressure results from an attraction, that is altogether independent of weight.—The lower portion of the wheel for the time being is in exactly the same condition as a bar of soft iron placed within a coil of wire circulating electricity. But as it rises up out of the coil during the rotation of the wheel, it grows less and less magnetic, the descending portions of the opposite side of the circumference acquiring increased magnetic power in the like degree.

M. Nikles's experiments have been made with large locomotives in full operation; and he states as the result, that the velocity of the wheel's motion does not in any way affect the development of the magnetic force. He finds the condition of the rail, as regards wetness or dryness, to be quite unimportant to the success of his apparatus, and he has already managed by its aid to achieve an ascent as rapid as one in five.

#### SCOTTISH REVENGE.

A long time ago, when the powerful clan of the Cumyns were lords of half the country round, the chief of that clan slew a neighbouring chieftain, with whom he had a feud; for feuds in those days were as easily found as blackberries, and quarrels might be had any day in the year for the picking. He that was slain, had at the time of his death, an only child, an infant of the name of Hugh. The widow treasured deep within her heart the hope of vengeance, which the daily sight of her son, recalling, by his features, the memory of her slaughtered husband, kept ever awake. With the first opening of his intellect, he was instructed in the deed that made him fatherless, and taught to look forward to avenging his parent as a holy obligation cast upon him; and so, with his strength and his stature, grew his hatred of the Cumyns, and his resolution to take the life of him who had slain his father. He spent his days in the woods practising archery, till at length he became a most expert bowman. None could send a shaft with so strong an arm, or so true an aim as Hugh Shenigan; and the eagle or the red deer was sure to fall beneath his arrow, when the one was soaring too high in the air, or the other fleeing too swiftly on the hill, for ordinary woodcraft. But it was not eagle or the deer that kept Hugh in the forest, and upon the mountains, from the dawn of the morning till the setting of the sun. He was watching for other prey, and at length chance brought what he sought within his reach. One day he climbed up the side of Benigloe, and took his station upon a spot that commanded a view of the glen beneath it and the opposite range of hills. He had ascertained that Cumyn would return to Blair by the glen that evening; and so it happened, that an hour or so before sun-fall, he espied the chieftain, with two of his clan, wending onwards towards the base of the hill. A few minutes more, and they would reach a point within the range of his bow. His practised eye measured the distance, and his heart throbbed with a fierce, dark emotion, as he put the shaft to the thong, and drew it with a strong arm, to his ear. With a whiz, the arrow sped from the bow, and cleft the air with the speed of light; while a wild shout burst from the lips of the young archer. His anxiety, it would seem, did not suffer him to wait till his foe had come within range of his arrow, for it sank quivering into the earth at the foot of him for whose heart it was aimed. The shout and the shaft alike warned the Cumyns that danger was nigh, and not knowing by what numbers they might be assailed, they plunged into the heather on the hillside and were quickly lost to the sight. But the young man watched with the keenness of an eagle, and his sense seemed intensified with the terrible desire of vengeance that consumed him. At length, just where the little stream falls from the crown of the hill, the form of a man became visible, standing out from the sky, now bright with the last light of the setting sun. With a strong effort, the young man mastered the emotion of his heart as the gambler becomes calm, ere he throws the cast upon which he has staked his all. The bow is strained to its utmost. The eye ranges along the shaft from feather to barb, it is shot forth as it winged by the very soul of him who impelled it. One moment of breathless suspense, and in the next the chief of the Cumyns falls headlong into the stream, pierced through the bowels with a deadly weapon.

#### I DON'T LIKE TO SEE

A dirty shirt covered with a clean dicky; a working man who has two hats, wearing the best every day; the windows patched with paper, rags, or turf; a sweep or baker passing through a crowd; a woman's bootlace dangling loose; orange-peels thrown on the footpath; good meat thrown to the dogs; a workhouse funeral with few attendants; a

rich man's funeral blocking up the streets; a woman beating her child because it had nearly got run over; two men fighting a pitched battle on Sunday afternoon, with a large attendance; a man after breaking a square of glass in a window, running away to escape detection; a child crying for hours together in a cradle; a man stuffed with rich food, until his legs are obliged to be tied up; a bedroom comb left full of hair; a servant waiting at the table with dirty hands; a woman slipping in at the back-door of a public-house, with a little jug, at tea time; a justice fining parties for getting drunk, who frequently gets 'fresh' himself; an old man of seventy and a young girl of seventeen going to the church to get married; a drunken coachman driving his horses at full gallop down a narrow street; clothes lying to be moth-eaten, while there are so many backs without covering; a coach-horse with bleeding shoulders; a dog in the home of a poor man who gets relief from the parish; an umbrella on a windy day, with two broken bones; a shop with dirty windows; the baliffs carrying away the bed and chair of a poor widow to be sold for rent; a poor ragged wife seeking her husband at twelve on Saturday night; a man exceedingly drunk and noisy at a temperance meeting; a teetotaler coming out of a 'tom and jerry' wiping his mouth.—*Educational Magazine.*

From the London People's Journal.

#### THE TEMPLE OF PEACE.

JOYFUL we view our country's fame  
Spread far and wide;  
Winning herself a glorious name  
With modest pride—  
Yet not by human art, or charm  
Of mystic word;  
Thy mighty hand and stretched-out arm  
Hath blest us, Lord.

Beauteous the edifice where throngs  
The wise and the gay;  
Worthy a place in deathless songs,  
When pass'd away;  
Noble the sight of happy feet  
Treading its halls;  
Mighty the thought our souls that greet  
Within those walls.

Wherefore that congress from the shores  
Of many a land?  
Only for fame each country's stores  
In order stand?  
Deepen the meaning of that vast  
And bright array;  
Something of sorrow for the past  
We feel to day.

Sorrow that human passions gave  
Their own impress  
To thousands mould'ring in the grave,  
Brothers no less.  
Sorrow that man hath learn'd so late  
To love his kind;  
That we, who seek to turn from hate,  
Have been so blind.

Hopeless for present, future time  
We need not be;  
Our palace is a pledge sublime  
Of amity—  
There hath been reared a noble pile  
On English ground,  
Where every continent and isle  
Its place hath found;  
Time will destroy;—that splendid scene  
Prostrate must lie;  
But love may rise from what has been,  
Never to die!

#### MESMERISM.

On Wednesday week, a lengthy paper was read by Dr Fern in the Anatomical Room of King's College Medical School, detailing the particulars of certain experiments on Mesmerism, performed within that Institution by Mr H. E. Lewis, on the occasion of that Gentleman's visit to Aberdeen. Besides a large number of students belonging to Dr Fern's classes, several clergymen and medical gentlemen were present. The experiments were made in the presence of Professors Fyfe, Thomson, and Fuller, the Rev. Dr Forsyth, Dr J. Williamson, and Dr Fern, and the report seems to contain the deliberate and impartial judgment of these gentlemen. It occupies nearly two columns of very small type in the Aberdeen Journal of last Wednesday and we are only able to give the conclusion at which these gentlemen have arrived in reference to Mesmerism. Dr Fern begins by stating that "he had been induced to request the above named gentlemen, to assist him in the examination of certain of the phenomena which Mr Lewis professes to produce on the human body, at the earnest solicitation of the members of his class, and because he was anxious that there should be no good ground for the statement that scientific men refused to examine such phenomena." After detailing the experiments made, the report states that "success attended whenever the person operated on had a full conviction of Mr Lewis's power, and when the latter commanded the effect by his utmost power of language, look, and gesture; and that failure always followed whenever gesture and look alone were resorted to—when the subject of operation was not aware of what was going on—and frequently when a command of the opposite kind was energetically given by another person. Further, when success in such experiments does occur, the evidence of its occurrence must be duly weighed, for that evidence is always obtained from persons who, on the supposition that they are actually under the influence of some powerful agent, are by this very circumstance

incapacitated from giving valid testimony, while beyond their own statements we possess no other information of the reality of the effect. Seeing therefore the experiments taken altogether, offer no evidence whatever in favour of the possibility of exerting any influence such as is usually styled mesmeric, upon persons at a distance—upon those in a separate room—or even upon a person in the same room as the operator, provided only that the person operated upon is not aware that another is attempting to produce such effect upon him; and that when effects are produced in other ways, these do not admit of the application of any proper test, and yet are often associated with the most intense bodily and mental excitement, it follows that, when considered physiologically, a highly injurious result is to be anticipated. Again, there are the best reasons, derived from actual experience, for believing that very serious permanent afflictions may be occasioned by even temporary indulgences in such artificially induced states, and, therefore, the utmost caution is necessary in all instances. Moreover, as it cannot be shown that useful results ever accrue from the production of such effects, it becomes the interest and duty of every one, at all susceptible of such influences, to avoid exposing himself to them; whilst, if such a person have any regard for the opinion of his fellows, and for his position in society, he will most strenuously exert himself to prevent the induction, in his own person, of a state in which one individual appears to give up every thing to the caprice and suggestion of another—probably an unknown person—yielding himself to the other's will in everything, however ridiculous or improper; unreservedly and voluntarily ridding himself of every moral restraint—of his judgment—of every thing in fact, which especially characterises and ennobles humanity.—*Montrose Standard.*

#### GOOD BREEDING.

Some capital hints on manners are given in a late number of Harper's Magazine. There is, says the writer, "no better test of ill-breeding than the practice of interrupting another in conversation by speaking, or commencing a remark before another is fully closed. No well bred person ever does it, nor continues conversation with one who does. The latter often finds an interesting conversation abruptly waived, closed, or declined by the former, without suspecting the cause. A well bred person will not even interrupt one who is in all respects greatly his inferior. If you wish to judge the good breeding of a person with whom you are but little acquainted, observe him or her, in this respect, and you will not be deceived. However intelligent, fluent, or easy one may appear, this practice proves the absence of true politeness. It is often amusing to see persons priding themselves on the gentility of their manners, and putting forth all their efforts to appear to advantage in many other respects, so readily betray all in this particular."

#### A DUTCHMAN'S NOTION OF ENGLAND.

The agreeable conversation of the Dutchman took off the depressing effects of a ten miles' ride through long avenues of trees. I remarked that the Hollanders were, in manners much as our forefathers were 150 years ago. He asked in what we had improved since that time, that we reckoned so beneficial to society? 'I have been in your country' said he 'and I notice your enormous jails and workhouses, and that you hang your artificers upon gibbets on the banks of the Thames [?]. We leave our doors unlocked, and have had but one execution in the states this seventeen years. We endeavour to prevent crime, by destroying the sources of depravity; but you, instead of affording opportunities of reform to the seduced and lesser offenders, serve them as we do our small fish, by letting them escape into the common pool, until they become culprits of a larger size. You are a very wealthy people, but you have millions of poor. Are your higher ranks better informed than ours? They certainly are more profligate. A Dutchman will not incline to copy the manners of England till he is convinced of your improvements.'—*Australian Asiatic Review.*

#### CHRISTIANITY.

Pure and genuine Christianity never was, nor never can be, the national religion of any country upon earth. It is a gold too refined to be worked up with any human institution without a large portion of alloy; for no sooner is this small grain of mustard seed watered with the fertile showers of civil emoluments, than it grows up into a large and spreading tree, under the shelter of whose branches the birds of prey and plunder will not fail to make for themselves comfortable habitations, and thence delude its beauty and destroy its fruits.

#### ESTIMATES OF HAPPINESS.

In all ages—amongst every people—by each class—do we find different notions of it entertained. To the wandering gipsy a home is tiresome; whilst a Swiss is miserable without one. Progress is necessary to the well-being of the Anglo Saxons; on the other hand, the Esquimaux are content in their squalid poverty, have no latent rules, and are still what they were in the days of Tacitus. An Irishman delights in a row; a Chinese in pageantry and ceremonies; and the usually apathetic Javan gets vociferously enthusiastic over a cock fight. The Heaven of the Hebrew is, 'a city of gold and precious stones, with a supernatural abundance of corn and

wine; that of the Turk—a harem peopled by hours; that of the American Indian—a 'happy hunting ground'; in the Norse paradise there were daily battles with the magical healing of wounds; whilst the Australian hopes that he shall 'jump up a white fellow, and have plenty of sixpences.' Descending to individual instances, we find Louis XVI. interpreting 'greatest happiness,' to mean—making locks; instead of which his successor read—making empires. It was seemingly the opinion of Lycurgus, that perfect physical development was the chief essential to human felicity, Plotinus, on the contrary, was so purely ideal in his aspirations as to be ashamed of his body. Indeed the many contradictory answers given by Grecian thinkers to the question—What constitutes happiness? have given occasion to comparisons that have now become trite. Nor has greater unanimity been shown amongst ourselves. To a miserly Elwes the hoarding of money was the only enjoyment of life; but Day, the philanthropic author of 'Sandford and Merton,' could find no pleasurable employment save in its distribution. Rural quietude, books, and a friend, are the wants of the poet; a tuft-hunter longs rather for a large circle of titled acquaintance, a box at the Opera, and the freedom of the Almack's. The ambition of the tradesman and the artist are anything but alike; and could we compare the air castles of the ploughman and the philosopher, we should find them of widely different orders of architecture. Generalising such facts, we see that the standard of 'greatest happiness' possesses as little fixity as the other exponents of human nature.—Between nations the differences of opinion are conspicuous enough. On contrasting the Hebrew patriarchs with their existing descendants, we observe that even in the same race the *beau ideal* of existence changes. The members of each community disagree upon the question. Neither, if we compare the wishes of the gluttonous school boy, with those of the earth-scouring transcendentalist, into whom he may afterwards grow, do we find any constancy in the individual. So we may say, not only that every epoch and every people has its peculiar conceptions of happiness, but that no two men have like conceptions; and further that in each man the conception is not the same at any two periods of life.—*Herbert Spencer.*

#### SYRIAN SUPERSTITIONS.

There are some superstitious observances, which are strictly adhered to by the peasants employed in rearing the silk-worm. Thus, when the eggs are first hatched, the peasant's wife rises up very early in the morning, and creeping stealthily to the master's house, flings a piece of wet clay against the door. If the clay adheres, it is a sign that there will be a good mousum or silk harvest; if it do not stick, then the contrary may be expected. During the whole time the worms are being reared, no one but the peasants themselves are permitted to enter the khook or hut; and, when the worms give notice that they are about to mount and form their cocoons, then the door is locked, and the key handed to the proprietor of the plantation. After a sufficient time has elapsed, and the cocoons are supposed to be well and strongly formed, the proprietor, followed by the peasants, marches in a kind of procession up to the huts, and, first dispensing a few presents among them, and hoping for good, to which they all reply, "Inshalla! Inshalla!—please God! please God!" the key is turned, the doors thrown wide open, and the cocoons are detached from the battours of cane mats, and prepared for reeling the next day.

#### VARIETIES.

*A Yankee Love Song.*—'I've seen her out a walking, in her habit de la rue; and it aint no use a talking, she's pumpkins and a few. She glides along in beauty, like a duck upon a lake. O, I'd be all love and duty, if I only was her drake.'

'Gentlemen of the Jury,' said a western lawyer, 'I don't mean to insinuate that this man is a covetous person, but I will bet five to one that, if you should bait a steel trap with a new threepenny piece, and place it within three inches of his mouth, you would catch his soul.'

'It is a curious fact,' says some entomologists, 'that it is only the female musquito that torments us.' A bachelor says it is not at all 'curious.'

Be not affronted at a jest. If one throws salt at thee thou wilt receive no harm, unless thou hast sore places.

A talking match lately 'came off' at New Orleans for five dollars a side. It continued, according to the Advertiser, for thirteen hours the rivals being a Frenchman and a Kentuckian. The bystanders and judges were all talked to sleep, and when they waked up in the morning, they found the Frenchman dead, and the Kentuckian whispering in his ear.

A wag has truly said, that if some men could come out of their coffins, and read the inscriptions on their tombstones, they would think they had got into the wrong grave.

A Western editor says that "the union is kept in a constant pickle by the efforts of those who desire to preserve it."

No street in Constantinople has a name, nor is there a lamp in it; yet there are 500,000 inhabitants! There is not a Post Office, nor mail-route in all Turkey, nor a church bell—but there are, at least, two dogs to every inhabitant.

Opinion is the great pillar that upholds the Commonwealth.

Zealously endeavour to maintain good principles.