

interruptions it meets by the chattering, joking, and loitering in the market places. A building which might be finished in a few weeks is kept on hand many months, and houses that should last for centuries often tumble down before they are completely finished.

We are taunted with a disposition to cheating, which indeed we are taught by the Talmud. We cannot deny this; but are the Christians, whose religion is more pure and more humane, always better than we? An instance may be given of the immorality of even the females, which will serve to show how far this disposition has proceeded. I would give a hundred dollars to any one who can buy from a milk-woman a quart of milk that has no water in it, or a basin of cream that is not mixed up with grits, flour, or the yolk of an egg. Thus, bad morals, a desire for petty gains, and avoiding hard work, are not wholly monopolized by the Israelites.—Idleness, and attempts to display an appearance above their condition, are to be seen among others as well as with us. The wives of the handicrafts, instead of being distinguished as good domestic mothers and wives, are dressed out in silks and satins, whilst their daughters are taught to trill Italian airs. The faults of others, however, in no way justify ours. We condemn not; but let us strive each one to forsake his own misdeeds, with the assurance, that notwithstanding our ignorance and depression, we shall succeed in the improvement of our condition; for the pure flame of virtue is by no means wholly distinguished in the hearts of Israel. Let our brethren compassionate the sorrows of their neighbours, let them be grateful to their benefactors, and obedient to those in authority. Clear away their prejudices, and they will not be the last in any honorable pursuit.

INSECT TRANSFORMATIONS.

This is the title of the last published portion of the *Library of Entertaining Knowledge*. Half of a volume only has appeared; but to judge from its intensely interesting character, the remainder will be looked for with much anxiety. We quote about half a dozen pages from the most attractive portion:—

"Muscular strength of Insects.

"In great muscular power, insects as Baron Haller remarks, appear to excel in proportion to their diminutiveness. Of this we have a remarkable example in the common flea, which can draw seventy or eighty times its own weight. The muscular strength of this agile creature enables it not only to resist the endeavours to crush it, but to take leaps to the distance of two hundred times its own length; which will appear more surprising when we consider, that a man to equal the agility of a flea should be able to leap between three and four hundred yards. The flea however, is excelled in leaping, by the cuckoo-spit frog-hopper (*Tettigonia spumaria*, Oliver), which will sometimes leap two or three yards—that is more than 250 times its own length; as if, (to continue the comparison) a man of ordinary stature, should vault through the air to the distance of a quarter of a mile. The minute observation by which such unexpected facts are discovered, has in all ages been a fertile source of ridicule for the wits, from the time when Aristophanes in his *Clouds* introduced Socrates measuring the leap of a flea, up to Peter Pindar's lampoon on Sir Joseph Banks and the emperor butterfly.—To all such flippant wit we have merely to retort the question of the Abbé de la Pluche 'if the Deity thought insects worthy of his divine skill in forming them, ought we to consider them beneath our notice?'

"Mouffet, in his *Theatre of Insects*, mentions that an English mechanic, named Mark, to show his skill, constructed a chain of gold as long as his finger, which, together with a lock and key, were dragged along by a flea; and he had heard of another flea, which could draw a golden chariot, to which it was harnessed. Bingley tells us that Mr. Boverich, a watchmaker in the Strand, exhibited, some years ago, a little ivory chaise with four wheels, and all its proper apparatus, and the figure of a man sitting on the box, all of which were drawn by a single flea. The same mechanic afterwards constructed a minute landau; which opened and shut by springs, with the figures of six horses harnessed to it, and of a coachman on the box, a dog between his legs, four persons inside, two footmen behind it, and a postilion riding on one of the fore horses, which were all easily dragged by a flea. Goosmith remarks upon these displays of pulchrean strength, that the feats of Sampson would not, to a community of fleas, appear to be at all miraculous. Latreille tells us a no less marvellous story of another flea, which dragged a silver cannon twenty-four times its own weight, mounted on two wheels, and did not manifest any alarm when this was charged with gunpowder, and fired off. Professor Bradley, of Cambridge, also mentions a remarkable instance of insect strength in a stag-beetle (*Lucanus Cervus*), which he saw carrying a wand a foot and a half long, and half an inch thick, and even

flying with it to the distance of several yards.

"It has been remarked, with reference to these facts of comparative size and strength, that a cock-shafer is six times stronger than a horse; and Linnæus observes, that if an elephant were as strong in proportion as a stag beetle, it would be able to tear up rocks and level mountains. The muscular power of fish, however, seems to bear a near comparison with that of insects. 'I have seen,' says Sir Gilbert Blane, 'the sword of a sword-fish sticking in a plank which it had penetrated from side to side; and when it is considered that the animal was then moving through a medium even a thousand times more dense than that through which a bird cleaves its course at different heights of the atmosphere, and that it was performed in the same direction with the ship, what a conception do we form of this display of muscular strength.' It should, however, be observed, that the muscular power of the sword-fish is principally shown in the rate of swimming, by which the animal overtakes the ships, and thus acquires the momentum which determines the force of the blow. We may understand the proximate cause of the strength of insects, when we look at the prodigious number of their muscles—the fleshy belts or ribbons by whose means all animal motions are preferred. The number of these instruments of motion in the human body is reckoned about 529; but in the caterpillar of the goat-moth, Lyonnet counted more than seven times as many: in the head 228; in the body, 1647; and around the intestines, 2186; which, after deducting 20, common to the head and gullet, gives a total of 4061.

"Any lady," says Kirby and Spence, 'fond of going to be tempted with an exhibition of fine lace, would experience an unexpected gratification could she be brought to examine the muscles of a caterpillar under the microscope: with wonder and delight she would survey the innumerable muscular threads that in various directions envelope the gullet, stomach, and liver intestines of one of those little animals—some running longitudinally, others transversely, others crossing each other obliquely, so as to form a pattern of rhomboids or squares; others, again, surrounding the intestine like so many rings, and almost all exhibiting the appearance of being woven, and resembling fine lace—one pattern ornamenting one organ; and another a second; and another a third.'

"We put the caterpillar of the goat-moth, to which we have before alluded, under a bell-glass, which weighed nearly half a pound and of course more than ten times the weight of the insect, yet it raised it up with the greatest ease. We then placed over the glass the largest book which we had at hand—'London's Encyclopædia of Gardening,' consisting of about 1500 pages of strong paper, and weighed four pounds; but this did not prevent the escape of the animal, which raised the glass, though loaded with the book, nearly a hundred times its own weight, and made good its exit. The multiplicity of its muscles above enumerated, 226 of which are situated in the legs alone, will enable us to understand how this extraordinary feat was performed. Even this power of muscle, however, would doubtless have been unavailing in raising the loaded glass, except in connexion with two favourable circumstances under which the experiment was performed, and which are necessary to be borne in mind to render the operation perfectly credible: first, that the wedge-like form of the caterpillar's head, in connexion with the peculiar shape of the glass, enabled it to lift it; and second, that, on one side of the glass resting on the table, the insect bore half the weight of the glass and book.

A peculiar toughness of external covering sometimes supplies the place of this muscular power in caterpillars. A singular instance occurs in the history of a common downy two-winged fly, with grey shoulders and a brown abdomen (*Eristalis tenax*, Falz.). The grub, which is cat-tailed, lives in muddy pools, with the water of which it has sometimes been taken up by paper-makers, and, though subjected to the immense pressure of their machinery, it has survived in a miraculous manner. Such is the account originally given by Linnæus. A recent compiler, mistaking Kirby and Spence's very apt comparison of this grub to a London porter nick-named Leather-coat-Jack, from his being able to suffer carriages to drive over him, without receiving any injury forthwith fancied the porter to be another insect, called leather-coat-jack, which will bear heavy carriage wheels to pass over it with impunity. Since the grub in question is rather soft, it must be the tough texture of the skin which preserves it, as in the similar instance of the caterpillar, of the privet hawkmoth (*Spuma Ligustri*), which Bonnet squeezed under water till it was as flat and empty as the finger of a glove, yet within an hour it became plump and lively as if nothing had happened.

"The instances however, which we have just recorded are peculiar rather than general, for caterpillars are for the most part very easily bruised, and otherwise injured."

The "Insect Transformations" will form

an excellent companion to the "Insect Architecture" volume, noticed in the last volume of the *Mirror*, in terms of high commendation, which we have much pleasure in extending to the part before us. The cuts are numerous, and for the most part, well executed. Of the value of the notes acknowledging the sources and authorities, we can give our readers but a faint idea. In single pages there are from four to seven and eight such references, so that phenomena are not related, or attempted to be established without precise authority. Such a volume as the present is therefore, of exhaustless interest to the philosophical inquirer, as well as to the general reader; since all these references connect as by chains or springs, and lead by innumerable tracks to some of the most fascinating studies of nature.

CASTLES IN THE AIR.

There exists in the world a certain set of sober-minded beings, who profess it as their opinion, that those thoughts which proceed from illusion or fancy ought to be banished from our minds; that time is foolishly and unprofitably consumed in thinking of impossibilities. They dislike or despise poetry as it is frequently composed of fictions; and represents things which are not in the ordinary course of nature. Some of these, who profess to admire nothing but reality or a representation of it, carry their prejudices to a ludicrous extent: for example, some of them will admire a staring likeness of the last Lady Mayoress and family more than the finest composition of Raphael. "We are not interested," say they, "in looking at features which we know never existed, in a group of ideal personages; but there is an evident reality in the delineation of her Ladyship; we see something resembling what is frequently before our eyes, and we are therefore pleased with it." These people will study with unwearied patience the incontrovertible facts of Cocker's Arithmetic, and abhor the beautiful fictions of the Fairy Queen; in short, matter-of-fact is their idol.—fiction, romance, or poetry, the objects of their scorn. A fanciful disposition of mind may be disadvantageous; but it may be doubted whether we should not be, as it were, wearied by the continual succession of realities, were it not for the occasional relief of fancy or illusion, whose ideal pleasures are at all times at hand to assist us when we are overcome with real cares of life. By these illusions I mean those incoherent ideas of future happiness or greatness which frequently occur to every one, and if I mistake not, even to those who profess to despise the workings of imagination;—ideas which, on reasoning, we might feel could not be realized without some most material change in ourselves and circumstances,—a sort of waking dreams, commonly designated by the name of *Castles in the Air*. These freaks of fancy prevail in a less or greater degree in every one, from the madman in whom they are strongest down to the ideot in whom their influence is hardly perceptible. In the madman they have overcome his intellect and entirely blinded his reasoning faculties, so that he fancies that he has lost his head, and runs about in search of it, or that he is transformed into a tea-pot, and is afraid of being broken. Next to him comes the poet: he seems to be the boundary which limits sanity; beyond him is madness; for small is the barrier which divides from inspiration. His imagination is more vivid than that of other men, but it has not quite overcome his reason. After these follow the general mass of mankind, who are all, in their several stations, subject to these waking dreams. What would become of the lover if he were denied some moments in which he might picture to himself a sort of acmé of happiness, which, upon reflection, he would feel was unattainable? Where would be the happy hours of a young author, if he were not led on by his fancy to dreams of imaginary Second Editions, which, on a return to his senses, and a perusal of the productions of his pen, would quickly vanish into air?—How wretched would be the solitary hours to a younger son of a remote branch, if he were denied the pleasing occupation of picturing to himself the pleasure he would feel in possessing the wealth and rank of a distinguished nobleman, should he, by the extinction of only fourteen awkwardly intervening heirs, arrive at the summit of his hopes. The petty clerk of an office, ceasing awhile from the toil and drudgery of his desk, revolves his plans for saving the nation and advancing his family, should he be made Secretary of State. The gambling groom, when he has lost his last penny and broken his dice-box against the table of the servants' hall, retires to meditate on the dash he will cut when he wins a prize in the Lottery and becomes a country Squire.—To these illusions are the minds of men continually prone; and at no time more so, than when, by any accident, they are left for a short time in solitude. Our thoughts then receive a selfish cast; they are directed towards ourselves and our prospects in life; and it at the same time we delight to weave to those spider-webs of fancy, which the bustle of the real world quickly sweeps away.

I am far from being one of those persons who think, or profess to think, that there is little in real life worthy of their attention; that common things are below their notice, and that their only pleasures are to be found in the ideal world of their imagination.—Those who hold these sentiments run into the opposite extreme from the set I before described. They say, (for I am always inclined to doubt that they think so.) that as solitude is the parent of that world of fiction, they infinitely prefer the sight of mountains, the roar of a cataract, or the gloom of a forest, to the acquaintance with man, his ways, manners, and conversation;—they profess that they could live retired from life, and feed upon the joys of romance and imagination. I would not advise them to try their plan; they would only destroy a pleasing illusion, and convince themselves that they were wrong. Yet, for my part, (though I am not one of these would-be anchorites,) I am fond of indulging myself at times in building castles in the air, and consequently of the occasional solitude which produces them. Were I deprived of these illusions, I should feel as if I had lost an intimate companion, who was always at hand to raise my spirits and to comfort me under every misfortune.

The ancient poets tell us, that of the contents of Pandora's box, every thing escaped, except Hope, which remained at the bottom to console mankind. Now I am disposed to keep up the Allegory, and to suppose these illusions to constitute the box itself in which this universal comforter Hope was contained. Indeed, as the box seemed necessary, in order that its contents should be retained, so these illusions appear to me to be necessary for the preservation of Hope, which is surrounded by, and, as it were, contained within them. Had it not been for them, it would, with the rest of the contents, have escaped and left the mind of man without a consolation in misfortune.

I must confess I pity those who have no pleasure in these illusions; and who tell you that when this

"Fancy's fairy frost-work melts away,"

they are more discontented than they were before, and feel that they have only been playing Tantalus with happiness. This, in my opinion, argues a most inverte determination (perhaps not an uncommon propensity) to be discontented; together with an ingratitude to the moments which have afforded us pleasure; an ingratitude to the moments which have afforded us pleasure; an ingratitude which deserves the self-inflicted punishment it often receives, of never enjoying any at all. A contented mind will encourage these imaginary pleasures, at whatever time they appear; will snatch the delight of them, be it but for a moment; and, when these magic fascinations are fled, will return to the dreary scene of reality with cheerfulness, thankful for what it has enjoyed, and prepared for whatever it is about to suffer.

AN OLD FRIEND WITH A NEW FACE.—Previously to his elevation to the sovereignty, Jerome Buonaparte led a life of dissipation at Paris and was much in the habit of frequenting the theatres, and other public places of amusement. He had formed an intimacy with some young authors at that time in vogue for their wit and reckless gaiety. On the evening after his nomination to the crown of Westphalia, he met two of his jovial companions just as he was leaving the theatre. "My dear fellows," said he, "I am delighted to see you: I suppose you know that I have been created king of Westphalia?" "Yes, sire, and permit us to be among the first to—" "Eh! what! you are ceremonious methinks: that might pass were I surrounded by my court; but at present, away with form, and let's be off to supper." Jerome upon this took his friends to one of the best restaurateurs in the Palais Royal.—The trio chatted and laughed, and said and did a thousand of those foolish things which when unpremeditated, are so delightful.—Conversation, it may be supposed was not kept up without drinking. When the wine began to take effect, "my good friends," said Jerome, "why should we quit each other? If you approve of my proposal, you shall accompany me. You, C—, shall be my secretary; as for you P—, who are fond of books, I appoint you my librarian." The arrangement was accepted, and instantly ratified over a fresh bottle of Champagne. At last the party began to think of retiring and called for the bill. Jerome produced his purse: but the king of Westphalia whose royal treasury had not as yet been established on a regular footing, could find only two louis which formed but a small portion of two hundred francs, the amount of the restaurateur's demand. The new dignitaries, by clubbing their worldly wealth, could muster about three francs. What was to be done? At one o'clock in the morning where could resources be found? It was at last deemed expedient to send for the master of the house, and to acquaint him how matters stood. He seemed to take the frolic in good part, and merely requested to know the names of the gentlemen who had done him the honour to sup at his house. "I am