PASSING.

O, the happy days of summer! O, the sunny days of summer!
With their mirthful music sighing.
The summer time is passing fleet;
We feel it not; our pulses beat,
But life is death, and time deceit.
O, the gleesome days of summer! O, the gladsome days of summer!
That are dying, dying, dying.

O, the happy days of summer! O, the smiling days of summer!
To the heart's refrain replying.
Our hearts now throb in pure delight,
"There is no night, there is no night,
For all is love, and love is bright."
O, the gleesome days of summer! and the gladsome days of summer
That are dying, dying, dying.

O, the happy days of summer! O, the golden days of summer!
Days that brought me my love, sighing.
I cannot let thee pass away;
Give me thine hand, I bid thee stay,
Summer will be with us alway.
O, the failing days of summer! and the fading days of summer!
That are dying, dying, dying.

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IS ATTRACTION AN INHERENT OR A DEVELOPED FORCE?

It is a popular belief that Sir Isaac Newton has left nothing undone in the science of Astronomy—that he has explored the whole subject and settled his law of Attraction on so solid a foundation that no effort of any subsequent investigator will be able to shake it. It may be wrong to attempt to disturb this popular belief. "Should we," says the gifted Giles, "in our estimate of opinion, pay no respect to the numbers who hold it, to the time it has endured, or to the great names by which it is commended? I say not so. Any of these may entitle an opinion to our examination; but the whole of them united may not entitle it to our assent." The theory of Attraction has been recommended to us on the authority of great names. Should we not bow down and receive that great theory without question, and accept it without reservation? We are told that the theory of Attraction is settled beyond the possibility of a doubt, that every particle of matter attracts every other, according to the law of the inverse square of the distance. If we ask modern astronomers what they mean by the word "Attraction," they will tell us that there is some principle *within* matter which has a tendency to *draw* other matter towards it; that this *principle* is inherent to every particle of matter and *draws* every other. If we pursued the enquiry a little further, our modern astronomer would have told us that Sir Isaac Newton was the discoverer of that great law, and that therefore we should accept it; that the distinguished ability of Newton, with those of course recommending it, would be our sufficient justification. Let us now question Sir Isaac Newton himself. He says, "What I call 'Attraction' may be performed by impulse or by some other means unknown to me. I use the word here to signify only in general any force by which bodies tend toward one another, whatsoever be the cause." The reader will notice at a glance that what our modern astronomers palm upon us as the Newtonian theory, is virtually only their own version of it. Newton clearly foresaw that matter acted as if there was a real attraction in the sense in which modern astronomers accept it; but, unlike them, he possessed that keen penetration which enabled him to perceive that such an idea was clearly unphilosophical. The theory of Attraction, as understood by the followers of Newton, has never appeared satisfactory to the mind of the greatest thinkers from the time of Newton to the present. It has formed the theme of a great many papers, at different times, presented to the various scientific institutions of the world.

In order that the reader may fully understand the real question at issue, it will only be necessary to state that the followers of Newton contend that the force or power of Attraction resides *within* bodies, while those who hold an opposite view contend that Attraction is a developed force and operates *without*; thus, the former *draws* and the latter *pushes* bodies together. From what is stated in the beginning of this article, it will be noticed that the authority and the great name of Newton cannot be claimed by either party. The question, so far as he is concerned, is an open one, and it is considered, and I think justly so, a fit subject for investigation.

The Newtonian theory of Attraction superseded the Cartesian system of Vortices. The Cartesians contended that space was full—that the interplanetary spaces contained a highly subtle matter called *ether*. Sir Isaac Newton denied the existence of a subtle matter in space, because he considered it absolutely necessary that space should be empty, because if space were full, it would have the effect of destroying those motions which Attraction was supposed to preserve.

Among all philosophers, Newton seems to have stood alone in denying that space was full. Among the ancients we find that Thales, Anaximenes, Anaxagoras, Aristotle, Zeno, Pythagoras, Lucippus, Democritus, Epicurus, and others all believed that space was full; while among the moderns who held the same view were Descartes, Kepler, Boucheporn, Seguin, Faraday, Guyot, Herapath, Euler, Lesage, Bernouilli, Villemot, and others, who not only believed in the existence of an etherial medium pervading space, but likewise endeavoured to show that it was in some manner connected with that mysterious principle which we call Attraction.

In order that the reader may fully comprehend the difference between what is held by the followers of Newton, and those modern philosophers whom I have mentioned, let us suppose that a blind man inhabited a circular island—that there was a post erected exactly in the centre of the island, that one end of a chain was attached to the post, and the other end to the leg of the blind man, and that the chain permitted him to go but a few inches from the river, and that the blind man was ignorant of the existence of the river. Let us again suppose that the blind man on occasional visits to the shore would find on the beach logs or pieces of timber which had been driven there by the action of the wind or the force of the current, the blind man would conclude that the island possessed some *inherent* principle *within* it which attracted (on the Newtonian principle) those pieces of wood to the island. What other conclusion would he arrive at? The poor man was blind. He could not see the river. He would not believe in the existence of a river, and, even if he did, would he not consider it absurd that such a light thing as water could bear on its bosom such heavy pieces of timber, &c., &c? Now, the followers of Newton are exactly like blind men with chains attached to their legs. They cannot see the river, and consequently they will not admit that it is the wind and the waves which drive the timber to the island. In like manner, Sir Isaac Newton denied the existence of that "Sea of medium" through which light passes in waves at the wonderful velocity of 192,000 miles per second.

In order to harmonize the existence of this ether, or medium of space, with the Newtonian theory, particularly to account for the reason that this ether or medium does not destroy these motions which Attraction is supposed to preserve, the followers of Newton were driven to make a statement which bears the impress of absurdity on the face of it. They contended that the ether of space was imponderable—that it has no perceptible weight, or is destitute of weight. I must confess that the word "imponderable" is chosen with some degree of cunning on their part, for two obvious reasons. 1st. If we prove to them that matter, to be matter, must possess weight, they will tell us that the word "imponderable" implies such to be the case. 2nd. If we prove to them that matter, however rare, must retard the motion of a planet, they will tell us that the ether of space is "imponderable," has no weight, consequently that any thing which is destitute of weight cannot retard a planet. I will now endeavour to show that the ether of space must possess weight. If I can show such to be the case, it will follow as a logical sequence that the ether must necessarily offer resistance to a planet in motion. The qualities or properties of matter may with propriety be divided into two classes, viz., the essential and the accidental. The essential qualities are: length, breadth, thickness and weight. Can we conceive it possible that matter could exist if deprived of either of these qualities? In order to point out the utter absurdity of their statement, I will admit, for the sake of argument, the Newtonian idea of Attraction. Now, the medium or ether of space is a gas of some kind. According to the law of Avogadro or Ampere, "Equal volumes of all substances, when in the state of gas, and under like conditions, contain the same number of molecules." Avogadro uses the word "Molecule," which means a *little mass* of matter. Ampere uses "Particle" in the same sense. According to the Newtonian theory, "*every particle* of matter attracts *every* other according to the law of the inverse square of the distance," and as this "Attraction" is the cause of weight, how is it that the *particles* of ether have no weight? If the particles of ether have no weight, then every particle of matter *does not* attract every other. In order to extricate themselves from the dilemma into which they have permitted themselves to fall, I would advise the so-called followers of Newton to alter their law so as to read "*Some* particles of matter attract *some* other, &c." It has always been the misfortune of parties who have denied the accepted opinions on any subject to be laughed or sneered at, or worse. It is scarcely possible that I can escape the same punishment, but that is no reason why I should not endeavour to lessen the laughter and curtail the sneer. In order to do this, I will quote from Sir Isaac Newton himself. He says: "It is inconceivable that inanimate brute matter should, without the mediation of something else which is not material, operate upon and affect other matter without mutual contact * * * That gravity should be innate, inherent and essential, to matter, so that one body may act upon another at a distance through a vacuum, without the mediation of anything else, by and through which their action and force may be conveyed from one to another, is to me so great an absurdity, that I believe no man who has in philosophical matters a competent faculty of thinking can ever fall into it." The philosopher Paley, in speaking of Attraction, says: "For my part I am totally at a loss to comprehend how particles streaming *from* a centre should draw a body *towards* it." The German philosopher, Hegel, says that Newton "has exhibited in his optics a perfect specimen of the manner in which experiment and reasoning should not be conducted." Abbé Moigno says: "If there is anything certain in the world, it is that the molecules of bodies and bodies themselves are not really self-attractive, it is that Attraction is not an intrinsic, but only a developed force." In bringing this article to a close, I may be permitted to remark that I intend at a future day to publish a work in which I will show the cause of that mysterious force which we call Attraction. I have already, in my pamphlet entitled "The Heavenly Bodies, How they Move, and What Moves Them," given a concise view of my theory.

DUGALD MACDONALD.

Montreal, Sept. 6, 1878.

SHAVING AND RAZORS.

A very sensible, but rather impatient, gentleman once committed suicide, leaving by way of explanation a scrap of paper, on which he had written, "I am tired of buttoning and unbuttoning." The world has always admitted the adequacy of the motive, though not every man has the courage to imitate the example. Closely allied to the annoyance which drove this unfortunate to seek repose in death is another infliction in the matter of our daily toilette, to which many, too many, of us are subject—we allude to shaving. How often must the victims of this custom, while cursing a blunt razor have been pursued by the thought, "True, it will not remove my beard, but it may serve to cut my throat, and then farewell to all shaving for ever." How many have given way to the temptation will perhaps never be known. In the pious hope of thinning the number of victims we offer to our readers a few remarks on the philosophy of shaving and the choice of razors. We shall be amply rewarded for our labours if in the course of the year a single wisand remains unslit which in the natural course of events would have been sacrificed in a moment of irritation caused by an undue economy of shaving-soap and a neglect of the use of the hone and the razor-strop.

In the first place, the question arises, what is the best time of day to shave? Common-sense at once replies that so dangerous and painful an operation should only be undertaken after the stomach has been comforted by breakfast, and here, as too often happens, custom and commonsense are at loggerheads, and the latter goes to the wall. As a matter of fact, then, we may assume that most men who shave at all are, unless they can spare time for a second visit to the dressing-room, obliged to shave before breakfast.

To this first question, then, we answer—Shave after breakfast if you can, before if you must, but on pain of looking slovenly never put it off till the evening Men who only shave at night always look unwashed and abominable all day. There are some poor creatures so extremely hairy that they are obliged to shave twice in twenty-four hours; the deep pathos of such an existence might furnish the material of ten novels and half-a-dozen tragedies.

Having thus settled the knotty question of the "When," we will proceed to consider "How;" and this latter subject naturally div. itself into three elements, all of which are essential to a successful shave. There is the question of the lather, of the razor itself, and lastly, of the means of keeping the razor sharp, which will entail a few thoughts on hones and razor-strops.

The shaving-brush should be ample and rather soft, the soap of the most soft and lubricant sort that can be got. Lay it on hot, and work it freely; the thicker, hotter, and softer the lather, so much the pleasanter and easier will be the shave. Never use biting or acrid soap; probably the more glycerine, honey, and grease that enters into the composition of the soap, the more agreeable will it be to the skin, but in this, as in so many other great affairs, experience will be the surest guide. The man who has shaved for a year or two and has not found out what soap is pleasantest to his cheek is deficient in the bump of research, and will never do great things in the world.

The choice of a razor is commonly thought so difficult that many give up all attempt at forming an opinion of their own, take what the cutler pleases, and rely upon his good faith and the credit of the house for a happy result. Possibly there exist tradesmen who will take back a razor which after a few days' trial does not prove up to the mark. If so, we shall be only too happy to make their acquaintance; personally we never met with one. And this is hardly to be wondered at, for nothing equals the delicacy of a good razor edge except perhaps the tenderness with which it requires to be treated. If a razor in tempering has not received sufficient heat its edge will be brittle; if, on the other hand, it has been too much heated it will be soft, but how is the purchaser to tell? He may, however, take with him a microscope, and carefully examine the edge all along. If it shows no bluntness or inequalities under this test a *prima facie* case is made out in favour of the razor. We ourselves do not use the microscope, but never on any account buy a razor which will not with any part of its edge sever a hair plucked from our own head and held freely between the left finger and thumb, while we chop at it with the razor in the right hand. The tool which will successively pass this test seldom turns out badly. We may also here record another fact—namely, that mounting has nothing whatever to do with excellence, and that expensive razors are not as a rule a whit better than cheap ones. A shilling razor bought of a small cutler in a country town is just as likely to do its work well and long as one mounted in tortoise-shell costing ten times the money and purchased at a West-end establishment. That is, of course, if you have taken the trouble to verify the state of its temper by the means which we have above pointed out.

Never dip your razor into boiling or very hot water to make it cut better; it is a most wasteful and deceptive proceeding. At first it certainly seems to answer and to make the edge keener, but in the long run it softens the steel, and you will find the weapon fail you at some critical moment when smoothness and despatch may be invaluable.

If you put your razor away wet, or with the edge ill-cleaned, you have no sort of right to blame anyone but yourself when it fails to do duty next day. Treat it tenderly as if you loved it, like Isaac Walton's worm, and you will, if you have had a fair start, be sure of a good and faithful servant. From time to time you must use the hone; do it yourself; don't trust your servant, he will certainly make a complete hash of the process, and most likely ruin your razor for ever. You should wipe your hone before using it with some soft rag or piece of old silk to remove all dirt; next spread a few drops of oil on the hone, and then, gripping the razor firmly by its handle with the thumb and forefinger, firmly holding it also below the shoulder of the blade, push the razor away from you, taking care to press evenly, flatly, and firmly, and to give the blade a sliding motion along the surface of the hone; when the whole of the blade has traversed the hone, reverse it, and do the same thing over again on the other side, always remembering to work from shoulder to point; by this means the minute teeth of the saw, which, as a microscope will show you, form the edge of the razor, will all be set in a proper direction, so as to give you the most benefit from their touch against the bristles of your beard when you set to work at your morning shave.

Recollect that a razor-strop must be used in the same manner; but that however carefully you may strop your razor, it can never prevent your being sometimes driven to the hone. When choosing a razor-strop, be careful to pick out a flat one. This is very important, as otherwise you will never get the teeth of your microscopic saw to be evenly set on the edge of the razor with an equable, keen, and fine-cutting faculty all along from one end of the blade to the other. The leather on the smooth side of the razor-strop should be calf, and of the best quality, and this side is of course used after the razor has been sufficiently sharpened on the side spread with the composition. It has the effect of smoothing the edge, and will so far be found useful.

FASHION NOTES.

LACE will be all the rage this fall.

PLUSH fabrics will be much worn.

BLUE is a favourite colour for coatings.

BONNETS will be worn of a larger size.

VELVET will be used for trimming dresses.

LUSTRELESS silks are the most fashionable.

onnets are to be embroidered with gold.

THIERS red is the new shade of garnet or maroon.

FELT hats will be more popular than ever this fall.

FLOWERS of fur will be among the winter novelties.

GOLD braids and gold embroideries are to be revived.

LACE mitts are worn at the moment on all occasions.

FEATHERS in cashmere colours are among the novelties.

PLAIDS will be much worn in the first weeks of the fall.

SUITS of English coatings are made all of one kind of goods.

"EGYPTIEN" and "Pompeien" are two fashionable dull shades of red.

THE leading styles in bonnets are the Gypsy, Quaker, and cottage shapes.

THE latest novelty in veils is black dotted net, lined with white illusion.

OLD style India satin, called Pekin silk, heavy and lustreless, will be worn again.

PALE blue and Jacqueminot red are favourite combinations of colour for evening dress.

STRIPED velvets and broche patterns in quaint designs are shown for ladies waistcoats.

PLEATED basques and pleated waist polonaises with deep yokes and wide belts are coming in vogue.

THE panier scarf is seen on some of the new dresses, and is said to be the precursor of the panier proper.

THE Louis Quatorze casque and long waistcoat is worn over a kilt plaited skirt without any scarf around the hips.

WHITE barege is used for inexpensive bridal dresses. Such dresses are trimmed with white satin and garlands of orange blossoms.

BACK draperies are only slightly more bouffant, and there are no perceptible paniers on the earliest importations of fall dresses.

ON some of the dresses for the next season are to be worn accessories—that is to say, plastrons, pockets, and cuffs composed entirely of feathers.

THE latest novelty in lace copied from the Paris Exposition is a mixture of black and white leaves and flowers on a groundwork of black Chantilly.

AN imperative rule in second mourning is that neither fringe, nor flowers, nor satin, nor jet shall be used in the ornamentation of a dress or other garment.

THE richest novelty in fans is of gold, wrought in a delicate open work, like the Chinese ivory fans. The most expensive have the owner's monogram in diamonds.

A NOVELTY for gentlemen's underwear is a netted shirt of small twisted cotton cord, to be worn under the flannel, or in place of flannel in very warm weather.

LONG pointed corsages, or simulated points on princess robes, are very fashionable for full evening dress. The point is very long and broad, and rounded, not sharp.