

THE RACE DOWN THE HILL.

Down the hill, down the hill, swift-footed little ones,—
Down the hill, Harry, Madge, Alfey and May;
I love to behold you, as ofttimes I've told you,
In innocent pastime all tripping away.

The green sward is soft if your feet should betray you.
So fear not the steep, but off, off with a will,
Your hearts shall beat lighter, your eyes sparkle brighter,
For th' health-giving sport of a race down the hill.

Away they go trooping, the gay little pixies;
Age pauses to watch with a smile their mad flight,
Some slipping and stumbling, one very near tumbling,
All laughing and shouting, and crazed with delight.

Now Harry the oldest, and strongest, and boldest,
A jolly young Spartan, has slackened his pace,
While Madge and May, flying, pretend to be trying
Their utmost to make little Al win the race.

And Al, fond believer in each fair deceiver,
With pleasure and pride feels his young bosom fill,
When loudly applauded, and lovingly lauded
For being first man in the race down the hill.

HUMAN HAIR AND ITS SUBSTITUTES.

Formerly, as ladies grew in years, and their hair became thin, a false "switch" was procured, and combined with the growing hair to repair the ravages of time. Great care was taken to conceal the fact that false hair was worn, and it was only to her most intimate lady friends that the fact was whispered even.

But now all this is changed. Nineteen-twentieths of all the women in the country who make any pretence to dress wear false hair or some artificial equivalent, and the lady who, no matter how luxuriant her tresses, should presume to appear in society without supplementing their natural growth with "rats," "mice," "switches," "bands," or some other specimen of the wigmaker's handiwork, would find herself so hopelessly in the minority and so laughed at by all, from her dressing maid to her most intimate friend, that resistance would be impossible, and surrender at discretion imperative.

The hair which adorns the heads of our belles and matrons comes mainly from the heads of the peasant women of France, Germany, and Italy. The hair buyer, supplied with sundry stores best calculated to captivate the rural eye, travels from village to village, seeking out those whose wealth of hair gives promise of a handsome price in the Paris market, the great centre of the hair trade, and drives the best bargain he can in obtaining it. Sometimes the price is paid in money, but more generally in finery of various kinds, such as ribbons, cheap laces, trinkets, etc., a trade in which the buyer realizes a handsome profit both ways, and the seller parts with the adornment which Nature has provided for almost worthless ornaments which she will soon tire of and throw aside.

Having completed his purchases, the buyer takes or sends the hair he has collected to the broker, who buys it at a price which pays the buyer well for his trouble. It next goes into the hands of the merchant, under whose supervision it is cleaned with meal, sorted as to length and colour, and put up in packages weighing from one to four ounces, each consisting of hairs of uniform length and colour, but not all the product of any one head.

Strange as it may seem, the hair which grows upon the heads of our fashionable ladies has no commercial value. Through much crimping, curling, and dosing with various hair "invigorators," "restorers," pomades, &c., it not only becomes variegated in colour, but hard and brittle, rendering it wholly unfit for use in the manufacture of hair work. Indeed, it is found that the more people "take care" of their hair, the more they injure it, while those European peasants who let Nature take its course, and seldom even comb their hair, produce the finest and most delicate article.

In the shape in which the buyer brings it in from the country, this hair is worth about \$20 per pound, in gold. After it has been sorted, the different lots vary in value according to length and shade, from \$1.50 to \$1000 per ounce. Indeed, it is almost impossible to set a limit to the outside price of choice lots of long hair of desirable shades, for so difficult are they to obtain, and so urgent is the demand from parties with whom money is a secondary consideration altogether, that the fortunate holders can set their own price and be sure of a customer. "A switch of very light gray hair," said a dealer, "thirty-six inches long and weighing five ounces, is worth \$1,000, and can rarely be found even at that high price."

In a country like ours, where fashion is a law to the poor as well as to the rich, it has been necessary to provide some cheap substitute for human hair, in order that factory and shop girls, and others of slender means, may vie with their wealthier sisters in the adornment (?) of their heads.

For this purpose, several substances are in use. The first material applied to this purpose was jute, which, after passing through several processes, is reduced to a long and glossy fibre which, in general effect, closely resembles hair, and which, owing to its comparative cheapness, rapidly came into general use. By means of dyeing, it was produced in all possible shades, and was eagerly bought in the shape of "switches," "waterfalls," &c.

In the process of adapting jute to this use, nicotine, the essential principle of tobacco, and corrosive sublimate, a most deadly mercurial poison, are used. It is also rendered exceedingly brittle, and breaks as easily as spun glass. The small particles find their way through the hair to the scalp, and, their edges being ragged from the combing process, act like so many poisoned bars, which, entering the pores and being held in place, introduce the poison beneath the skin, and cause irritation and ulceration. It is owing to this that the idea became current that the jute contained animal parasites that bored into the skin and laid their eggs beneath it. The most careful examination has failed to discover any vestiges of animal life in jute, but the little bars we have spoken of have been distinctly seen protruding from the pores of the scalp, and the sores they produce give every evidence of being the result of mercurial poison.

A more recent and harmless substitute for human hair is found in fine cotton and linen thread, dyed to the proper shade and sized to give it the requisite gloss, and then made up into the various forms in which it can be used. Switches of this material are sold at retail for about one dollar each, a price at which a very handsome profit is probably realized by the dealer.

Probably the best substitute for human hair yet introduced is silk fibre. Its fineness and strength render it peculiarly suitable, while its brilliant lustre adds to its resemblance to

the real article. It is used both alone and in connection with real hair, especially in those cases where a switch just sprinkled with gray is required. To produce this effect, dark hair and gray silk fibre are taken in unequal proportions, varying according to the shade desired, and woven together, the result being with difficulty distinguished from a combination of real hair, yet costing, owing to the immense price of long gray hair, a moderate sum comparatively. Bands and braids are also made of silk, the exposed portion only being of this material, and the filling of jute or "combing."

Formerly, hair work was sold only in a few of the leading hair dressing establishments. Now, large and expensive stores are devoted to its sale in the large cities, nearly every dealer in fancy articles keeps some of the grades of so called "hair goods," and in every country store neat card board boxes, containing switches, chignons, and other head gear, are offered for sale. So long as fashion holds its present course, every woman in the land nearly is a customer, and thus an enormous bulk of business is done, paying handsome profits to all engaged in it. At first the percentage of profit was extremely large, but competition has reduced this materially. But the volume of business has increased in a like ratio, and the sale of hair and hair work continues to be exceedingly profitable.—*N. Y. Commercial Bulletin.*

THE SORROWS OF A HOLIDAY.

With the approach of the summer the annual exodus of city residents to our watering-places will begin, and the familiar spectacle of a public silently submitting to inconvenience, extortion, and insult will be again witnessed. The typical citizen who goes to a watering-place stays at a hotel where an immense amount of discomfort is furnished at a very high price. Of course, his rooms are small and hot. Of this he has perhaps not just reason to complain, since it is only natural that the landlord should prefer to rent two small rooms for the same price each which he could charge for one comfortable room. He has, however, a right to ask that his food should be comfortable, and that he should be secured some small degree of rest and quiet. As a rule, however, his meals are badly cooked and wretchedly served, while, if he is in search of rest, he will find the average railway sleeping-car decidedly more quiet and comfortable than his room at a watering-place hotel.

It is to be presumed that the overworked man who obtains a week's holiday, and decides to pass it at a watering-place, expects to find the quiet of which he is so much in need. In point of fact, he will be regularly awakened every morning at about 4 o'clock by those preposterous persons who infest every hotel, the object of whose misguided lives seems to be to take absurd trains at indecent hours. When these wretched persons have finally departed, and their last trunk has been noisily dragged through the corridors, the bootblack begins his round, and acts as though he had no right to carry away a pair of boots without first making sure that their owner is awake. To him succeed the riotous persons who set the breakfast table, and apparently strive with one another in friendly rivalry as to who shall drop the largest quantity of knives and break the greatest amount of crockery. Then follows the hideous clamour of the gong, and the wearied man, conscious of the futility of further hope of sleep, resigns himself to the inevitable, and begins the morning struggle for lost boots and unattainable food.

Perhaps he deludes himself with the hope that by going to bed early he can make up the sleep which he loses in the morning. In this belief, he shuts himself in his room at, say, 10½ in the evening. No sooner is he in bed than a mania for promenading the corridors apparently seizes upon every man with particularly noisy boots. A knot of some half-dozen overgrown boys, from eighteen to twenty years of age, then gathers either in an adjoining room or on a veranda in his immediate neighbourhood. A mysterious Providence probably never created a being more undesirable to his intelligent fellow-men than the "fast" youth of the watering-place. His idea of pleasure is synonymous with bad whiskey, and his theory of manliness involves the noisy use of the most profane language. Within easy hearing of the tired courtier of sleep, this estimable young man devotes himself, until long past midnight, to rehearsing to others of his kind his personal opinions of some fascinating "gal," and the remarks that the "gal" in question has made to him. The natural dreariness of this narration is relieved by frequent blasphemy and unlimited indecency of language. It is greeted at intervals by the insane laughter of his audience, and when it comes to an end, through the exhaustion of the weak inventive powers of the youth, he joins with his comrades in some rough horse play, or not unfrequently attempts to howl some particularly unbearable comic song. To remonstrate with him is hopeless, as the most courteous request is met by the foul language with which he asserts his right to make himself as much of a nuisance as he possibly can. There is nothing for the would-be sleeper to do but to wait until the youth has sickened himself with too many cigars, and is forced to retire to his room. By this time the early travellers are already preparing themselves for their dismal journeys, and the broken sleep of sheer weariness is all that is left for the man who has come to a watering-place for the sake of rest.

The discomforts of small rooms and of a limited supply of water; the unattractive character of the table; and the ceaseless noises of the early dawn; the indecent insufficiency of personal accommodations, which is one of the most intolerable features of the watering-place hotel, are all bad enough in their way. These nuisances, however, do not compare with the nuisance of the fast young man. His suppression is demanded by every instinct of civilization and decency, and the hotel-keepers should awake to the fact that he is rapidly rendering the watering-place a burden, and the hotel uninhabitable by decent people.—*N. Y. Times.*

Clavel, of Basle, Switzerland, has published an account of the preparation of a new violet, obtained by heating magenta and iodide of ethyle without pressure. He calls it the "night violet," and obtains it by connecting the apparatus with a glass tube, in which the iodide of ethyle, as fast as it is volatilized by the heat, is recondensed and falls back as a liquid. The apparatus is a common cast iron boiler heated by means of a steam jacket. The cover has two openings for two glass tubes in connection with a worm of condensation. The vapours rising out of the boilers pass into the worm, are there condensed, and from thence run as a liquid into the second glass tube which leads back the iodide of

ethyle in a regular stream. For the preparation, he takes magenta crystals, solid caustic soda, and iodide of ethyle, with a suitable quantity of wood spirit; or the iodide of methyle can be used, and alcohol used as a solvent. The magenta and the soda are put into the boiler together, and well stirred till the mixture becomes uniform. Half of the iodide of ethyle is then added, the lid closed, and the condenser connected. Heat is now applied for six hours. The apparatus is then cooled, the remaining half of the iodide of ethyle added, and heating resumed for six hours more. After this time the connection between the condenser and the second or return glass tube is closed by means of a tap, and another tap is opened to allow the condensed iodide of ethyle to run off into a receiver. Heat is again applied, and maintained until all the iodide of ethyle and wood spirit are distilled over and preserved for use on another occasion. The mass which is left behind in the boiler is then taken out, and boiled for a considerable time with a strong lye of caustic soda. This removes all the iodine in the form of iodide of potassium, while the "night violet" is deposited as a cake. This is now in the state of an insoluble base. To render it soluble in water, it must be combined with an acid. For this purpose, the cake is dissolved in dilute sulphuric acid. When this has been done, the colour is thrown down by neutralizing with a solution of soda. It is then washed in cold water, dissolved in boiling water, and finally reprecipitated by the addition of common salt. Unlike the ordinary aniline violets, which, when seen by artificial light, seem of a reddish brown colour, this dye retains its beautiful blue tone. A variety of shades may be obtained by varying the proportions of magenta, soda, and iodide of ethyle.—*Scientific American.*

BRANDY FROM WOOD SHAVINGS.—C. G. Zetterlund has been making some experiments in the distillery at Hulta to make brandy out of shavings. For this purpose, they were boiled in an ordinary kettle under a pressure of 0.116 kilograms of steam to the square centimeter. There was then put into the kettle: Shavings (pine and fir, very wet), 9.0 cwt.; sulphuric acid, 1.18 sp. gr., 0.7 cwt.; water, 30.7 cwt.—Total, 40.4 cwt. After boiling eight-and-a-half hours, the mass of shavings contained 3.33 per cent. grape sugar, and after eleven hours cooking, 4.38 per cent. A farther increase in the quantity of sugar could not be attained. There was obtained in all, from the 40.4 cwt., about 1.77 cwt. of grape sugar, or 19.67 per cent. of the weight of the shavings. The acid was neutralized by lime, so that the cooled mash ready for fermentation contained one-half degree of acid, according to Luedersdorff's acid tester. The mash had a temperature of 30°C. when the yeast prepared from only 20 pounds of malt was added. At the end of 96 hours, the mash had done fermenting, was then distilled and yielded 61 quarts of 50 per cent. brandy at 150°C., perfectly free from all flavour or smell of turpentine, and of a very pure taste. It is more than probable that the manufacture of brandy from shavings on a large scale would succeed if it were ascertained, by experiment, with how much water the acid must be diluted, and how long it must be boiled, for both of these circumstances exert a great influence over the production of sugar. If it were possible to convert the whole of the cellulose in the shavings into sugar, each hundred weight of air-dried shavings would yield about seven gallons of brandy of fifty per cent. The shavings of the leaf bearing trees would probably give the best results.—*Journal of Applied Chemistry.*

LAKE SUPERIOR GOLD DISCOVERIES.—The region of Lake Superior after getting up an immense silver excitement now goes in for gold. The reported gold fields lie from seventy to one hundred miles back from the head of Thunder Bay, in a desolate rocky region, anything but a favorable location to live in. The gold is associated with sulphurets of iron. Reports say that one party of 12 men took out 10½ tons of ore this winter that "assays" from \$5,000 to \$7,000 per ton. The *Saginaw Enterprise*, in speaking of this wonderful region, also states that the latest discovery is an abundance of tin ore, richer than the Cornish mines, yielding from 40 to 60 per cent. of metal. It also states that the great Silver Islet mine is as rich as ever, and another new vein has been found as rich as the Silver Islet.

EXPLOSIVE PILLS.—Some pills prescribed by a physician in England contained: One half grain nitrate of silver, one sixth grain extract nux vomica, and one half grain muriate of morphine, together with *Cons. ros.* and extract of gentian. They exploded in a very short time, evolving a considerable amount of heat. A similar case occurred in the practice of Dr. Jackson, of Nottingham, England, who prescribed pills containing four grains of nitrate of silver, one grain muriate of morphia and extract of gentian. The lady patient, who had the box about her person, was badly burned by the explosion. Pills containing nitrate of silver and creosote or carbolic acid become heated, and even take fire. Of course, when chlorate of potash is employed the explosion is much more violent.

BROWN TINT FOR IRON AND STEEL.—Dissolve, in four parts of water, two parts of crystallized chloride of iron, two parts of chloride of antimony and one part of gallic acid, and apply the solution with a sponge or cloth to the article, and dry it in the air. Repeat this any number of times, according to the depth of colour which it is desired to produce. Wash with water and dry, and finally rub the articles over with boiled linseed oil. The metal thus receives a brown tint and resists moisture. The chloride of antimony should be as little acid as possible.

Joe Coburn, the pugilist, when on a sparring tour in St. Louis went into a restaurant and sat down to the table. After looking over the bill of fare he told the waiter to bring him a plate of chicken. The waiter returned with a plate of custard. Joe got mad and asked the waiter what he meant by fetching custard when he called for chicken. The waiter started to take it back when Joe said, "Never mind, it makes no difference whether it is custard or chicken; both are made of eggs."

For the first time for hundreds of years the two opposite Mahomedan sects of Sunis and Shiachs knelt together in harmonious prayer at Meerut, on the occasion of thanksgiving for the recovery of the Prince of Wales.