

SCIENCE UP TO DATE.

CURRENT GLEANINGS FROM FIELDS OF INDUSTRY.

Natural History and Philosophy—The Horsefish—To Succeed the Tandem Wheel—Experiment in Electricity—General Notes of Progress.



HE horsefish, called also moonfish and monkeyfish, is not found often in these waters; perhaps not more than a dozen are taken from the bay in a year. It is a summer visitor here, coming from the warmer waters southward along the Atlantic coast, and it goes as far northward as Cape Cod. The picture presented herewith shows a horsefish that was caught in Gravesend Bay and is now in the New York Aquarium. This fish is about five inches in length, but some specimens are nearly a foot long. The horsefish is very thin and deep bodied, with a very long forehead and a mouth low down, giving a fancied resemblance to a horse's head. Its sides are silvery or pearl-tinted, and when the sun shines upon the fish at the aquarium its pearly sides reflect light upon the white porcelain side of the tank. The horsefish has a very short spiny dorsal fin and a long soft dorsal fin, the front edge of which is black. Its anal fin is long and low. The ventral fins vary in length with the age of the fish, becoming very short as the fish becomes old. The young fish has a little black blotch on the side, just behind the head. The horsefish is a quick and powerful swimmer. When in danger it darts through the water with great swiftness.—New York Sun.

Electrical Experiment.

A very pretty electrical experiment may be conveniently made by any boy or girl. Get an ordinary straight lamp chimney, and around the middle of it—outside, of course—put a band of tinfoil, gluing it on with mulling. Also put a narrow band of the foil along the outer surface of the chimney from one end to within half an inch of the circular band. Be sure that one band does not touch the other. Now take a round bristle brush, such as is used for cleaning lamp chimneys, and around it wrap a dry silk handkerchief. Insert the brush, thus covered with the handkerchief, in the chimney and rub it briskly back and forth, being careful that your hand does not come in contact with the tinfoil. If you do this in the dark, you will see an electric spark leap across the interval between the two bands of tinfoil, which will show that the friction has electrified the chimney. The interest of the experiment may be increased by tying a bit of iron or brass wire around the central band of tinfoil, letting one end of the wire hang down ten or twelve inches from the chimney. To this end attach four or five strips of rice-paper, obtained by cutting up a sheet of cigarette-paper. Then insert the brush in the chimney in the opposite direction from that first indicated, and when you rub it briskly you will see the strips of paper stand out from each other as if they had life. And so they have, for the time being, since the electricity generated in the glass by the friction has passed from the glass to the tin-foil and thence to the paper. This simple experiment demonstrates three principles of natural philosophy, to wit:

1. A bad conductor of electricity, such as glass, becomes electrified by friction.
2. A good conductor, such as tinfoil and metallic wire, will transmit electricity from a charged body—glass—to an uncharged body—paper.
3. Bodies charged with the same kind of electricity—the strips of paper—will repel each other.

Perfect dryness of air and materials is essential to the success of the experiment; therefore you should select a fine, dry day, and air the glass and the handkerchief before the fire as a precaution.

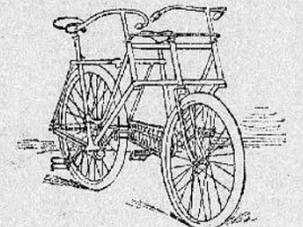
Injuries from Sudden Changes in Altitude.

Some months ago, a congress of Swiss physicians held a meeting to discuss the best means of checking the practice of rushing tourists up by railways to high altitudes. So many persons received injuries that either shortened their lives or caused immediate death that the matter became one of great importance to the profession. In sudden ascents from ordinary levels to the summits of great elevations, the most disastrous results may follow. Persons with affections of the heart should not go the entire length of such a journey continuously. The railway, or what might be called shooting people up, is a thousand times more injurious than the old-fashioned way of climbing. With the latter people gradually became accustomed to the change of air, and the system adapted itself to such conditions. It is now under discussion that it will be necessary for tourists to be examined previous to making these ascents in this sudden fashion. Already it is proposed to establish at all stations emergency depots, with medicines and physicians within call. It is said that rheumatic and gouty persons, and

others having special affections of the heart, are likely to die during such journeys, or to have the heart so overtaxed that they may never recover their former conditions. Certain it is that something must be done. The yearly average of such accidents in Switzerland is between forty and fifty. It would be quite worth while for all persons who have ambitions to ascend these great heights to be examined by competent physicians before taking the trip. Last season a man supposed to be in usual health made the ascent and died in the presence of his friends from heart exhaustion. It is suggested that many cases of slipping, falling and similar accidents are caused by the defective heart action and the confusion consequent thereon. It is to be hoped that the board of managers will enforce some stringent rules, thereby compelling people who have not sufficient judgment to refrain from imprudence to wait until they can with safety make the ascent, or to go by easy stages and carefully accustom themselves to the changes incident to these high altitudes.

To Succeed the Tandem.

Bicycle manufacturers seem inclined to introduce some sort of a machine that



will take the place of the tandem wheel now in use. The majority appear to favor a wheel on which two riders can ride side by side. Several wheels of this character have been manufactured, but they have been on the bicycle type and not much fancied. Something new on the bicycle market is what is called the Companion, a bicycle, as shown in the accompanying cut. It seats two persons, being of the ordinary type of safety with two wheels. At a glance the construction of the wheel would lead to the inference that this bicycle would upset with two people, but, on the contrary, one person can ride it, and, on account of its lightness and admirable outline, it is becoming very popular.

Japan's Other Army.

Japan's other army is not the victorious army which lately marched like fate toward Pekin, defeating and demoralizing its huge, unwieldy foe, but it is the workers who labor in Japan's factories, and produce the wealth which buys the arms and ammunition, the uniform and the rations of its more widely known brother in the field. Japan has made astonishing developments in her industries, and her workmen are intelligent and diligent. The principal following is the manufacture of cotton goods. Unfortunately the employers abuse the complaisance of their docile and faithful workmen. The usual time to begin work in the factories is 5 a. m., but the workmen often appear earlier. First-class workmen earn fifteen cents a day, so that Japan is not only the land of poetry, but of poverty also.

The government first built the factories, and then handed them over to the companies now owning them. One establishment alone, with the unpronounceable name, Kanegafuchi, employs 2,100 men and 3,700 women. These are divided into two shifts, day and night, of twelve hours each, and only once in the twelve hours do the laborers pause in their hurried toil for refreshments. All these establishments, of which the above is but one, though one of the largest, have first-rate English machinery, and the production is not equal to the consumption. So Japanese syndicates are rapidly increasing their original plant. Thirty-five of these spinneries give work to 16,879 women and only 5,730 men. Little girls from eight to nine years old are forced to work from nine to twelve hours. The law demands that these babies should be in school, but the law is outraged. These industries made Japan financially able to sustain her war with John Chinaman.

The Importance of Clean Streets.

There is nothing in city life that is more important than clean streets. This, it is admitted, would remove more sources of disease than any other sanitary measure it is possible to take. It is a fact acknowledged by the best authorities that there is no more fruitful distributor of disease than street dust, which is filled with the expectorations of diseased persons of all classes and conditions. People afflicted with the most loathsome maladies go unmolesied about the streets and expectorate everywhere. The wind dries up the material, it mingles with the dust, and may, on the next breeze, be swept into our noses and throats. It is not too much to expect that the time will come when the most stringent measures will be taken on this subject. People have no right thus to risk the health and lives of the community.

Three-Wheel Carriage.

A novelty is a three-wheel carriage. It is built somewhat on the principle of a child's tricycle. The advantage claimed for it is that as a lady's carriage it would remove out of the way of rich robes the dusty or muddy wheel that gives so much trouble.

Small Bottles That Do Not Intoxicates.

What with pipe-clay for the white shoes, russet polish for the tans, black lacquer for the patent leathers and plain "dressing" for the kids, it takes quite an array of small bottles to keep up the summer footgear.

WOMAN AND HOME.

CURRENT NOTES OF THE MODES AND HOUSEHOLD HINTS.

Wings for Fall and Winter Hats in Demand—Gray in the Lead—How to Keep a Man's Love—Stuffed Green Peppers.



HE wholesale milliners have extra forces of girls at work preparing the unusual quantity of wings demanded by the retail merchant. The wings, which are seen in fancy shapes, are made on the foundation of wired cotton. The cotton is first cut in the shape desired, then lined with buckram and the edges are wired. To this frame work tiny birds' feathers are pasted until the whole frame is covered. The feathers may be used in their natural color or dyed. The process which an ordinary bird's wing undergoes to obtain the nacre or shaded effect is most interesting. The wing is first soaked in soap and water and then drained. The entire wing is then dyed the color desired for part of the shading. After this one part of it is bleached and then dyed in another color. In this way the shaded effect is produced. The last step in the process is that of steaming. Frequently one girl can complete in one day six dozen wings of one pattern. Again, if the pattern is very difficult, she is unable to finish more than a dozen and a half.

Stuffed Green Peppers.

In reply to a request for a receipt for stuffing green peppers, I send the fol-



PROMENADE COSTUME.

lowing: Cut a piece an inch in diameter from the stem end of the peppers and remove the seeds. Shred fine some tender cabbage and salt as you would for a salad; add one-fourth of the removed seeds, a little grated horseradish and all kinds of whole spices desired, not forgetting white mustard seed. Small whole cucumbers not more than an inch long are a nice addition, if procurable, but if these are used throw them into hot salted water and let stand until cold before using. After thoroughly mixing the filling, stuff the peppers, pressing it well down, and replace the stem pieces, fastening with two toothpicks in each pepper. Place these stuffed peppers in salted water for five hours, or until they taste of the salt, then pack them in jars. Heat sufficient vinegar to cover them, add a small piece of alum and pour while hot over the peppers. When cold cover with grape or horseradish leaves, or add sliced horseradish root to vinegar to preserve it. I have found that tying a piece of white sheet wadding tightly over the cover of a jar of pickles or preserves will serve almost as well as sealing them.

Shades Newly Fashionable.

The woman who didn't rush into corn-flower blue can now congratulate herself on that fact. At its first coming this tint made a good bid for general favor, but a strong new shade never holds its vogue. Now, though all other blues are to be extremely popular, the cornflower is condemned, and that means that its wearers must have discarded it or resorted to the dye-pot and renovation. Brilliant green is to have much favor, and the clear-skinned brunette will count one for her side. Wood-colored satin is in a new shade of brown that has as yet appeared only in that material; indeed, it would hardly adapt itself to less lustrous weaves. It is on the order of the popular string colors and linen shades of the day with more brown in it, and in satin is calculated to set off reddish hair and brown eyes charmingly.

For Louis XVI. Costumes.

Spangles, jewels, and tinsel of all kinds will glitter in the coming Louis XVI. costumes. A model gown is of gray faille open over a rose-colored petticoat. The gray is closely covered with waving lines of silver cord set from hem to belt of the skirt, and at the foot of the petticoat there is a row of large amethyst stones headed by a

wide band of silver soutache, over which falls spangled lace. The short coat is of amethyst velvet, lined with rose-colored satin. It fastens double-breasted, the front being cut low to show the ruffles of lace about throat and bust, and short to show the two little pockets set in the waistcoat just below the waist line. The four buttons of the coat are large amethysts set about with yellow paste, an enormous buckle of yellow paste holds the lace at the throat, and the waistcoat of white satin is covered with waved silver to match the skirt. A yellow felt cocked hat trimmed all over with gray plumes is held in place by amethyst buckles. This costume is described by the dealer as a simple luncheon gown, but there is a lot of glitter to it.

Gray in the Lead.

Of the less showy hues grays are in the lead. Gray and amethyst color is to be one of the most artistic combinations offered in the coming season, and already one or two models in gray cloth combined with amethyst velvet and pale lilac chiffon are seen. In the accompanying sketch a dress of iron-gray woolen suiting appears. Its wide skirt takes the stylish outline just above the hem in front, and at that point three rows of stitching run around it. Sleeve caps are simulated by like stitching, and the right side of the blouse waist is cut into tabs that fasten across with oxidized silver buttons. This fastening, however, is only ornamental, for the waist fastens beneath it. Collar and belt, both quite plain, are made of brilliant plaid. A cap of the same goods and general scheme of ornamentation accompanies this dress, and is topped by a big chiffon ruching.

Veils of the Season.

This season the summer girl is devoted to chiffon, and this material is used in the veil of the hour. In its most

Under a Shield.
The natty cape in the sketch is in dahlia red silk velvet, lined with satin of its own shade. The shield front is



of white satin, and the buttons are pearl, set with rhinestones. It is exceedingly smart and an effective adjunct to the natty toilet. With it is worn a chic little hat in turban style, made of dull gold braid interlaced with black, and simply trimmed at one side by two spiky black quills and a gilt ornament.

Loose Fronts.

The pretty loose fronts that have been worn all summer need not be given up, for they will be needed on even the latest of the new model dresses. All the coats and redingotes that are to come will take on beauty and femininity by means of ruffles and tumbles of soft stuff about the throat and down in front. The graceful lines of the figure will at the same time be set off by the masculine exactness of fit of back and sides.

How to Keep a Man's Love.

- Do not buy his cigars.
- Do not buy his neckties.
- Do not buy his suspenders.
- Do not crease his trousers.
- Do not ask him at breakfast what he wants for dinner.
- Do not insist upon his going to church simply to please you.
- Do not tell him that your boy, if you have one, takes his temper from him.
- Do not insist upon receiving company that is uncongenial to him.
- Do not wear a bonnet when he thinks you look better in a hat, and vice versa.
- Do not ask him when he comes home



BALL GOWN.

popular guise it is white, sprinkled with black chenille dots, and is warranted to make even a plain young person good to look upon. Though white and black is the popular combination for the chiffon veils, many are sold with the dots in brown or dark blue. Plain chiffon veils are also in demand. They match in color the hats with which they are worn. The sewing silk veil still holds its own for steamer or yachting wear. The calling veil of the summer is an imported affair of black thread lace with a dainty border. Many of the net veils with a fancy mesh show a tiny border of yellow valenciennes lace, but none of these veils in any sense rivals in popularity the one of dotted chiffon.

Walking Hats.

Walking hats in alpine shape show a crown of different color from the brim—for instance, one having a crown or yellow straw has a brim of black, and is trimmed with a band and knot at the side of black satin ribbon. A novelty is shown in felt of different colors, black, of course, included, having a low, broad, flat crown and flaring brim, trimmed with a plain band of ribbon and a "painter's brush" at the side.

Aversion to Exaggeration.

The sleeves of all the gowns and coats in the trousseau of Princess Helene of Orleans were only slightly raised, as her royal highness has a great aversion to the exaggerated and fashionable puff.

Forty-two per cent of the population of Rhode Island are wage-earners.

in the evening what he has been doing all day.

Do not persist in his giving you the same attentions he gave you before you got him.

Do not cross him in his opinions. For heaven's sake let him think he is smarter than anybody else.

Do not tell him what your dearest woman friend has said about her husband's good qualities.

A Brave Little Woman.

It was a Chevy Chase car. She was tall and broad in proportion. Her gown was very tight and her diamond earrings very large and sparkling. She sat near the end of the seat, and she might have moved along to make room for somebody else, but she didn't. She simply sat and stared haughtily ahead. There was a tiny little mouse-colored woman standing, and the sight of the bedamoned one made her nervous. You could see her very toes twitch. At length she leaned over with great politeness.

"Pardon me, madam," she said, "but have you paid for two seats?"

The stout woman was speechless.

"Oh," went on the mouse-colored one, "I thought you had. Please move along, then."

And the other moved, but I feel sure she had apoplexy when she got out of the car. You could see it coming on.—Washington Post.

Justice—What is the charge against this prisoner? Officer—Having an infernal machine in his possession, yer honor. Justice—Anarchist or bicyclist?

OUR WIT AND HUMOR.

CURRENT PRODUCTIONS OF THE FUNNY MEN.

Dainty morsels for our lean readers—The Girl of To-day—Quick and Sure—The Result of an Experiment—Notes.



HE has mastered Greek and Latin. She has read her Huxley through; She can sit in silk and satin And discourse on Trilby, too; She can argue evolution, She can bake a luscious tart; She is up in elocution, And a connoisseur in art. She's the fountain-head of knowledge, And at tennis she can play; She came riding home from college On a bike, the other day; But I've heard of something better, Since with her I plighted troth; She can draw upon her papa For enough to keep us both! —T. C. Harbaugh.

Strategy.

When'er he saw the gay gallants, Who danced like puppets at her whim, He smiled to think no turn of chance Could e'er reserve such fate for him.

He married her. She seemed to view All things in lights that pleased him best; So well she planned, he never knew He was a puppet like the rest!

No Inconvenience.

"Do you not hear me?" she fiercely demanded. "Do you not hear me invoke curses upon your head?"

He smiled a wan, apathetic smile. "I hear you," he answered in a hollow voice. "But what ice do a few curses cut on the head of bald man in the fly season? What, I say?"

He sat as one in a trance, or church reception.—Detroit Tribune.

A Conscientious Flirt.

Prude—Well, why did you refuse him after you had taken him away from the girl he was engaged to?

Flirt—Oh, I haven't quite reached the point where I will receive stolen goods.—Detroit Free Press.

Quick and Sure.



Slob McGurk—Say, Skaggs, lend me yer gun—I want ter commit suicide.

Skaggs—Naw! I've think I want ter lose a good gun? Look at here! Ter easiest an' cheapest ting fur you ter do is ter walk inter Duffy's saloon and say yer a dog-catcher—see?

(The coroner's decision was instantaneous death by shooting, stabbing and beating.)—Truth.

Precaution.

"In taking this abominable of iron," continued the physician as he prescribed for a fair patient, "you must be careful not to get it on your teeth."

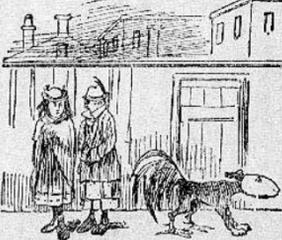
"Why so?" she inquired with mild surprise.

"Because it will decay them. Some take iron in capsules, but I think by taking it through a straw you can keep it from getting on your teeth."

"Well, now, doctor, suppose I should leave my teeth upstairs while I take the iron in the kitchen, do you think there would be any danger?"

"Well—er—no. I think that would be a reasonable precaution."—San Francisco Post.

The Result of an Experiment.



Lizzie—What do you call it? Maggie—It ain't got no name yet—yer see father put an egg under a New-foun'lan' dorg an' made him set on it!—Truth.

Profanity Point.

A certain narrow channel with swift tides, near Kittery, Maine, has been known for many years as "Pull-and-bed-d Point." Steamships get along so easily that now it is simply known as "Profanity Point."

A Postmist.

Goodfello—Cheer up, tny boy. Remember the sun shines brightly after every storm.

Barker—Yes; but that only shows people how shabby and bedraggled the storm has left one.