

Women and Their Interests

What If the Sun Went Out?

By GARRETT P. SERVISS.

"If the sun should go out, how long would it be before darkness would appear on the earth?" asks a reader.

Eight minutes, eighteen seconds and five hundredths and sixty-six one-thousandths of a second!

At the end of that brief interval of time the blue curtain of day would disappear as if an almighty hand had snatched it off, and the dome of night, spangled with stars, would instantaneously arch the earth. We would be plunged into darkness so quickly that for a moment nothing would be visible. Then the piercing rays of the stars would begin to affect our eyes, and after that, gradually, our immediate surroundings would dimly emerge from the gloom. There would be starlight, but no moonlight, for the moon shines only with the reflected sunlight.

At first the disappearance of the light would be the thing most troublesome to us, but as time went on a chill would begin to creep over the sunless earth, and out of the dark and frozen air, all around the globe, a blizzard would descend, as the atmospheric moisture condensed. When days and weeks had elapsed the awful cold of outer space would chill the atmosphere down to the earth's surface and animal and vegetable life would alike perish in the endless winter of universal night!

The time mentioned above is that which would elapse after the extinction of the sun before the earth would be plunged in darkness depends, of course, upon the speed of light, combined with the distance from the sun to the earth. According to the table of astronomical constants used in the calculations of the American Nautical Almanac office, the mean distance of the earth from the sun is 92,947,717 statute miles, while the velocity of light is 186,324 miles per second.

astronomical units (the astronomical unit here spoken of is the earth's distance from the sun), and also know the second we get for a quotient, 498,566, which represents the number of seconds and thousandths of a second that light requires to pass from the sun to the earth. Dividing this by 60 gives us the same period in minutes and parts of a minute.

But it must be remembered that a slight degree of uncertainty exists in regard to the figures representing the distance of the sun and the velocity of light. The sun may be a hundred thousand miles nearer, or farther, and the velocity of light may be twenty-five miles per second greater, or less, than the figures adopted show. Still, this would make but an extremely small change in the time required for the passage of light from sun to earth.

A quite perceptible difference, however, arises from the variations in the earth's distance from the sun, due to the eccentricity of the earth's orbit.

We are about three million miles nearer the sun at the beginning of January than at the beginning of July, from which it follows that in the sun should be put out in Summer, the cosmic night would be about sixteen seconds longer in reaching the earth than would be the extinction occurred in winter. In the Southern Hemisphere exactly the opposite state of affairs exists, for there winter occurs when the earth is farthest from the sun.

The fact that light requires a measurable time to traverse long distances makes it an agent, or instrument, of astronomical research of inestimable value. As Professor Young has remarked, when we observe a celestial body we see it not as it is at the moment of observation, but as it was at the moment when the light left it.

If, then, we know its distance in

how long light takes to traverse that unit, we can at once correct our observation by simply dating it back to the time when its light started from the object. This correction is called the "equation of light" and the time required for light to traverse the astronomical unit of distance is called the "constant of the light-equation," amounting, as stated before, to 498,566 seconds.

To understand the application of this, suppose that we take some star which attracts our attention by its beauty or its brilliance. We say to ourselves, with a glow of intellectual enthusiasm: "Behold that mighty sun, whose golden rays are so much richer than our daylight! Can any body doubt that there are worlds around it enjoying its genial warmth?" Whereupon an astronomer may correct us with the remark: "What you say about the magnificence, but distant sun, is very probably true, but you should speak in the past tense for the light by which you see it left its surface long years ago, and though it still appears to be shining in the sky, it may in reality have ceased to exist."

Regarded in this way, the starry heavens exhibit a perspective of time. When we look at the nearer stars we see backward one, two, three or four years, when we look deeper, we see backward in time ten or twenty years, and when, with the aid of the mightiest instruments yet devised, we plunge into the profoundest depths of the universe, we behold the starry hosts as they existed thousands of years ago. For all that we can tell, those stars may have fallen like leaves in wintry weather long before the pyramids of Egypt were erected, but the light that left them while they were yet alive with radiance has traveled steadily on, unconscious of their fate, and bringing us an assurance of their continued existence.

JAPAN READY TO GIVE RUSSIANS MORE HELP

Premier Okuma, in Statement, Tells of His Country's Intentions

Tokio, Aug. 23. — The Kokumin Shimbun says: "Premier Okuma states that Japan has decided to give greater assistance to Russia to prosecute the war. He could not discuss details, but allowed it to be understood that this assistance would take the form of the forwarding of greater supplies of munitions."

The Associated Press learns that Japan has decided to employ all available governmental and private resources for increasing the output of munitions for the allies, particularly Russia.

The Japanese government believes the time has arrived for more concerted action against the enemies of Japan and her allies.

One of Russia's greatest embarrassments in her conduct of the war has been a shortage of guns and ammunition. Military writers, while not discounting the effectiveness of the enormous Austro-German offensive movement, have stated that the extent of Russian reverses in the last few months has been due in part to inadequate supplies of munitions.

Four Allentown Men in Hunt For Big Game

Special to The Telegraph

Allentown, Pa., Aug. 23. — Four prominent Allentown men left yesterday on what is the finest sportsmen's trip ever planned from this city. The party consists of Colonel Harry C. Trexler, Quartermaster General of Pennsylvania, owner of the big buffalo, elk and deer park on the Jordan, 10 miles north of this city; George H. Hardner, one of the country's most big game hunters in the country; Daniel Ritter and Irwin J. Koehler. They will be gone six weeks and will hunt for big game in the wilds of Wyoming.

MRS. DARLINGTON RECOVERING

New York City, N. Y., Aug. 23. — Mrs. James H. Darlington, wife of the bishop of Harrisburg, who had a severe surgical operation performed last month and has been under physicians' care at the Oriental Hotel, Manhattan Beach, for several weeks, is so far convalescent as to go to the mountains with the bishop and her family. They will stop at Lake Minne-waska. Her many social friends here are hoping that she will be able to spend September and October at the family cottage, "The Corners" in Newport, R. I. Miss Eleanor Townsend Darlington, is visiting Mrs. Philip Livingston at Bar Harbor, Mt. Desert, Maine.

IN THE FASHIONABLE BOLERO STYLE

A New Gown Adapted to Spring and to Summer.

By MAY MANTON



8607 Bolero Costume, 34 to 42 bust.

The bolero makes a really important feature of the new styles. Here is a gown that shows a most attractive one, made sleeveless to be worn over a gumpie of thinner material. The accompanying skirt is in three pieces with applied tucks that accentuate the flare. In the illustration, the material is silk and wool gabardine with crepe de chine used for the blouse and charmeuse satin for the sash, but the design will be found a good one for many different materials. It would be exceedingly handsome made up in the faulle silk that is so fashionable or in one of the new Spring satins or in pongee or foulard or in chiffon tafeta or in fact any material of the sort. It would be very charming for such materials as cotton crepe, cotton voile and the like. Many of the new voiles and new crepes are most attractive with their embroidered flower designs in color and one of these would be lovely over a white blouse. The blouse is just a plain one that can be buttoned up snugly at the throat or rolled open. The sash may be a straight piece of ribbon or material as liked.

For the medium size will be required 6 1/2 yds. of material 27 in. wide, 4 1/2 yds. 36, 3 1/2 yds. 44 in. wide, for the skirt and bolero; 2 yds. 27, 1 1/2 yds. 36, 1 yd. 44 in. wide, for the folds; 3 1/2 yds. 27, 2 yds. 36, 1 1/2 yds. 44, for the blouse.

The pattern 8607 is cut in sizes from 34 to 42 in. bust measure. It will be mailed to any address by the Fashion Department of this paper, on receipt of ten cents.

Bowman's sell May Manton Patterns.

French Report Sinking of German Torpedoboot

Paris, Aug. 23, Noon. — "Two French torpedoboots encountered and sank a German torpedoboot destroyer off Ostend (Belgium) last night," says an announcement made here to-day. "Our boats were undamaged."

BATHING PLACES CLOSED

Amsterdam, via London, Aug. 23. — The Berlin Vossische Zeitung states that the bathing places on the rivers near Berlin have been closed by the police owing to several cases of cholera among ship workers in Brandenburg province.

11 OF KAISER'S SHIPS LOST IN RIGA BATTLE

Petrograd Statements Say German Fleet Departed Following Defeat

London, Aug. 23. — A dispatch to the Central News from Petrograd says: "The president of the duma has announced that the Germans lost the battle cruiser Moltke, three cruisers and seven torpedoboots in the Riga battle."

SORE LITTLE BOY USES CUTICURA

"My little boy was one sore eruption all over his throat and chest, and extending the full length of his little arms. It broke out in red pimples turning yellow, and broke open until baby's arms, throat and chest were one solid eruption and a crust formed over it. It seemed to be irritating and painful as he would cry to be touched. It itched and burned, and his clothing hurt and pained him.

"My mother had used Cuticura Soap and Ointment so I purchased a cake of Soap and a box of Ointment. He was well before they were used." (Signed) Mrs. Roy O. Chapman, Towanda, Pa., Jan. 28, 1915.

Sample Each Free by Mail

With 32-p. Skin Book on request. Address post-card "Cuticura, Dept. T, Boston." Sold throughout the world.

WEATHER CHANGES

which bring sudden drops of temperature almost down to chilly depths remind us of the coming of Fall with its crisp, frosty nights. Are you prepared for the change of season?

Coal Prices Advance

Why not have Kelley fill your bins before Sept. 1 and take advantage of the saving?

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There is character in glasses. Properly-fitted glasses make people look bright and intellectual. Poorly-fitted glasses make good-looking men and women appear commonplace.

A pair of Torics with the right kind of mounting are as attractive in appearance as they are easy to the eye.

Buy a pair of glasses that are both comfortable and attractive.

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Rail and Boat Excursion

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Sixty Mile Steamer Ride ON Beautiful Chesapeake Bay

Maryland's Famous Pleasure Resort

Sunday, August 29

Bathing, Boating Fishing, Crabbing

SPECIAL TRAIN Leaves Harrisburg 7:20 A. M. Returning, steamer leaves Tolchester Beach 4:00 P. M.

\$2.00 Round Trip \$2.00

Sale of tickets limited to capacity of steamer. Tickets on sale Saturday, August 28.

Pennsylvania R. R.

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Bring your next copy to us for illustrative treatment. One treatment will convince you that our methods are a success.

The Telegraph Art & Engraving Departments
216 Locust Street

Cumberland Valley Railroad TIME TABLE

In Effect June 27, 1915.

TRAINS leave Harrisburg—
For Winchester and Martinsburg at 5:05, *7:52 a. m., 9:40 p. m.
For Hagerstown, Chambersburg, Carlisle, Mechanicsburg and Intermediate stations at 5:05 a. m., *11:55 a. m., *3:40, 5:37, *7:45, *11:00 p. m.
Additional trains for Carlisle and Mechanicsburg at 9:48 a. m., 1:16, 3:26, 6:30, 9:35 a. m.
For Dillsburg at 5:05, *7:52 and *11:55 a. m., 3:16, *5:40, 8:37 and 6:30 p. m.
*Daily. All other trains daily except Sunday.
J. H. TONGE, H. A. RIDGLE, G. F. A.

School of Commerce

Troup Building, Phone, Bell 19463, 15 So. Market Square, Harrisburg, Pa. Fall term begins! Day School, September 1; Night School, September 6. Office open from 8 a. m. to 5 p. m. Phone, write or call for catalog or further information.

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Try Telegraph Want Ads

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The Highest Award Possible

1 Baked Beans with Pork and Tomato Sauce	28 Pickled Onions
2 Baked Pork and Beans without Tomato Sauce	29 Stuffed Mangoes
3 Baked Beans in Tomato Sauce without Pork	30 Pickled Walnuts
4 Baked Red Kidney Beans	31 Queen Olives
5 Cream of Tomato Soup	32 Manzanilla Olives
6 Cream of Pea Soup	33 Stuffed Olives
7 Cream of Celery Soup	34 Pure Olive Oil
8 Mince Meat	35 Tomato Ketchup
9 Plum Pudding	36 Tomato Chutney
10 Cooked Sauer Kraut with Pork	37 Chili Sauce
11 Peanut Butter	38 Tomato Relish
12 Spaghetti (a L'Italienne)	39 Mushroom Ketchup
13 Fruit Preserves	40 Walnut Ketchup
14 Fruit Jellies	41 Mustard Ketchup
15 Apple Butter	42 Mustard Dressing
16 Peach Butter	43 Pepper Sauce
17 Plum Butter	44 Mandalay Sauce
18 Grapefruit Marmalade	45 Worcestershire Sauce
19 Euchred Figs	46 Prepared Mustard
20 Cranberry Sauce	47 Powdered Mustard
21 Preserved Sweet Gherkins	48 India Relish
22 Preserved Sweet Mixed Pickles	49 East Indian Chutney
23 Sour Gherkin Pickles	50 Evaporated Horseradish
24 Sour Mixed Pickles	51 Sweet Red Peppers
25 Chow Chow Pickle	52 Pure Malt Vinegar
26 Dill Pickles	53 Pure Cider Vinegar
27 Euchred Pickle	54 White Pickling and Table Vinegar
	55 Spiced Salad Vinegar
	56 Dill Vinegar
	57 Tarragon Vinegar

HEINZ

PAXTANG PARK

This week's bill at the Paxtang Park Theater will be headed by Klein, Abe and Nickelson. Known as the "three emperors of comedy and music," the act is a musical offering of merit with plenty of good, lively comedy on the side. This trio has played all the leading theaters of the country with great success and is well known to local theater goers.

A great novelty attraction that will appear on this week's bill will be, Dravess Fiasco Hambo, in an original comedy sketch entitled, "Fun in a Hot-tentot Hotel." All sorts of novelties are introduced, including juggling, acrobatics, comedy dialogue and trick scenery.

Others who will add to the attractiveness of this week's park program are: Bissett and Wilson, a classy couple in new songs, dances and refined comedy; Olivette, the dancing violinist with the wonderful eyes, and Jack Polk, who says he is just "polking" along with some new stories to tell and some new riddles to sing.

Another big fireworks display will be the special attraction at the park on Thursday evening. Manager Davis promises his patrons a varied pyrotechnical program that will be well up to the standard set by previous park big bargain day at the park on September 1 are now on sale at the various stands in the park and at the street railway waiting room. For ten cents one may have a ride on the merry-go-round, a ride on the derby racer, a trip through the zig-zag and an ice cream cone. Contests and races for numerous prizes will be a feature of

the day's program and at least one surprise will be introduced for the benefit of ticket holders. However, it will not be necessary to purchase a bargain ticket to gain admittance to the park or to enter the contests. The park will be open to the public as usual. On September 6, Labor Day, the Tyroone Band will give two free concerts at the park. The concert program will be announced later.—Advertisement

Arabic an Unarmored Passenger Steamship

London, Aug. 23, 1.30 P. M.—Supplementing official information given out previously concerning the sinking of the Arabic, the British admiralty to-day made the following announcement: "The Arabic was an unarmored passenger ship, outward bound to a neutral port. It was thus impossible for her to have been carrying contraband."

"She was sunk by a German submarine without warning and she neither attempted to attack the submarine nor to escape from it."

PLANS ARRANGED IN ITALY

Udine, Italy, Aug. 23, via Paris, 11.30 a. m.—The fact is disclosed that joint military action by Italy with England, France and Russia against Turkey was arranged in July.

Wine, Barred by Bryan, Now Served Diplomats

Washington, D. C., Aug. 23.—Grape juice has lost its place as the official beverage of the State Department. The drink made famous by William J. Bryan has been forsaken and henceforth diplomats and others at official state entertainments will find the "kick" restored to the liquids served.

For more than two years no alcoholic drink has been served at official functions of the Secretary of State.

Share of China Trade For United States

Washington, D. C., Aug. 23. — An aggressive campaign to secure for American business a share in the development of the enormous resources of China has been planned by the Departments of State and Commerce. The project contemplates the development of an American vested interest in China that will insure the United States a fair share of that country's foreign trade.

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