Scientific Discussions by Garrett P. Serviss

I had the great pleasure to-day of interesting a primarily uninterested boy in a problem which some time in his life may turn up in a seriously important form, and then, perhaps, he will remember his little morning lesson under the trees on the lake shore.

The sun was brilliant, the air transparent, the wavelets were dancing and away off in the distance the opposite shore appeared sharp and clear.

"Suppose you had to find out how far across it is here," I said to the boy, who was throwing stones at a chipmunk (as I used to do myself at his age), how would you do it?"

"Oh, I don't know," he said, indifferently, hunting around for another projectile, as the chipmunk popped up in a new place among the rocks.

"But you might be alone on an island and have to find out the distance to shore to see if you could swim it. There is always some fellow getting into Robinson Crusoe's fix. If Robinson had had this problem he would have solved it somehow."

"I don't see how; he'd a just guessed it, I guess."

"Well, you try that way and see how it works. How far do you guess it is over there."

"'Bout a mile."

"Do you think I can beat that guess with this pencil?"

"Can you?"

"Look and see. There's a big elm on the top of the bluff across there, right against the sky. Now, I've been looking at the elms around this part of the country and roughly taking their measure. This sort of thing is useful information, and some day, I hope, you'll learn to lay it in, as I have. I know that these trees, when full grown, as that one shows that it is by its shape, average 70 to 80 feet in height. Let us call the one across the lake 75 feet tall.

"Very well; now I take my lead pencil, know that the lead in it is about a sixteenth of an inch thick, the pencil itself being a quarter of an inch thick. I'll show you in a moment how you can make quite a surveying instrument out of a lead pencil, provided you know these little things about it. See; I cut back the wood a trifle to bare the lead fairly, and then hold the pencil horizontal, and at such a distance from my eye that the thickness of the lead just covers the height of the tree over there. I know—another bit of useful knowledge easily acquired and remembered—that when I hold out my arm with this bend any object held in the fingers is about twenty inches from my eye.

"Now I have got the problem practically solved. All I have yet to do is to make a very easy little calculation. I'm sure you've studied simple geometry in school, and you know what a triangle is. Probably, however, your teacher never showed you what a worker of everyday magic a triangle can be.

"In fact, I've got two triangles, a big one and a little one, working together for me to measure the distance across the lake. The small triangle is formed by two lines of sight from the center of my eye, one just grazing the top side and the other the bottom side of the pencil lead. The thickness of the lead measures the third side. The large triangle is formed by these same lines of sight continued on until they encounter, one the top and the other the base of the tree.

"Now these triangles are similar, that is, they have the same shape and relative proportions, although differing enormously in size. The length of either of the triangles bears to its width (that is, the length of its shortest side) the same proportion that the length of the other bears to its width.

"Now we've got the clue. In the small triangle I know already the length, which is 20 inches, and the width is 1-16 of an inch. Then the length is 20x16, or 320 times the width. In the large triangle I know the width (the height of the tree), but not the thing to be found out (the distance across the lake). But the little triangle gives me the needed proportion, which is 1 to 320. I simply multiply 75 feet, the height of the tree, by 320 and get 24,000 feet, which must be the distance from my eye to the tree. It turns out to be more than four times as far as you guessed it, for 24,000 feet are over four and one-half miles."

while the chipmunk in vain invited a renewed bombardment in the intricacies of his Hindenburg line.

The boy had followed with an attention I had hardly hoped for. He asked intelligent questions, and when I left him I saw him holding twigs at arm's length and squinting across the lake.

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HILL'S CASCARA QUININE BROMIDE

Standard cold remedy for 20 years—in tablet form—safe, sure, no opiates—breaks up a cold in 24 hours—relieves grip in 3 days. Money back if it fails. The genuine box has a Red top with Mr. Hill's picture.

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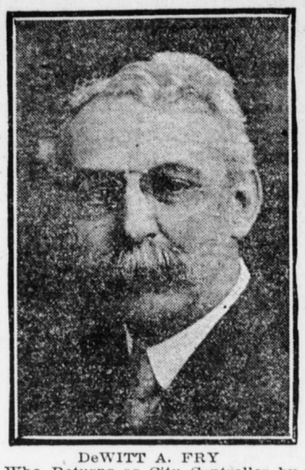

DeWITT A. FRY
Who Returns as City Controller by Big Vote

HARRY F. OVES
Elected City Treasurer by Handsome Majority

CENTRAL PA. NEWS

Every Republican Wins at West Fairview Polls

West Fairview, Pa., Nov. 5.—Every Republican candidate on the borough ticket was elected here yesterday. For justice of the peace Herman Smith defeated E. Ed Eslinger by a vote of 190 to 63. L. R. Spong got one vote for the office. Chester R. Davis, E. E. Erb, O. K. Eshenour and Charles F. Witmer were elected to council over W. J. Brougher, Amos R. Fox, Charles Honich and Nelson Snyder. E. H. Curry was chosen to the unexpired council term over Elmer E. Walters by a vote of 159 to 80. Thomas Glessner defeated David W. Shettel for judge of election by 161 to 83. Charles Ensley was elected inspector of election over Fred T. Lowe by 185 to 59. William S. Hoover and J. Harper Lantz were chosen school directors over Theodore Eslinger and William A. Tenny. For the unexpired term as school director Fred O. Seidle defeated H. K. Diffenderfer by 200 to 46. Vance Seidle was elected auditor over Clyde W. Luse by a vote of 189 to 56. For constable Robert Stair defeated John E. Webb by 170 to 77.

State Leader Will Speak at Chambersburg

Chambersburg, Pa., Nov. 5. — A child welfare exhibit is being held here under the auspices of the State Board of Health and the Chambersburg Civic Club. Miss Ruth Childs, who is in charge of the exhibits in the State, will be the chief speaker in the high school auditorium to-morrow night. School children under 14 years of age will attend the exhibit and prepare essays on their impressions of the work, the winner to be awarded the blue ribbon.

TOWNSHIP OFFICERS

Shepherdstown, Pa., Nov. 5. — The following township officers were elected: judge of election, R. A. Shughart, Democrat; inspectors, S. A. Williams, Democrat; A. M. Zook, Republican; school directors, I. W. Miller, Republican; George Beistline, Democrat; supervisor, S. P. Hoffer, Republican; auditor, E. D. Stouffer, Democrat; constable, Coover Miller, Republican.

TRAFFIC FALLS OFF

Lebanon, Pa., Nov. 5.—Because of the suspension of mining in the bituminous fields, traffic on the Lebanon Valley branch of the Reading Railroad has dropped at least 70 per cent within 48 hours. The Reading had transported east of Rutherford from 1,500 to 2,000 cars of bituminous daily.

CHANGE COMES DECEMBER 1

Lewistown, Pa., Nov. 5.—December 1 is the date set for the change of title from Lewistown Junction to "Lewistown" and from Lewistown to "Lewistown-Chestnut Street," according to the decision of the Railroad Administration in reply to a petition of the local Chamber of Commerce.

HALE AND HEARTY AT 84

Marietta, Pa., Nov. 5.—Samuel Thuma, of West Marietta, who will soon be 84 years of age, is the last charter member of the O. U. A. M. of Marietta, and is hale and hearty. He still takes an active interest in the order, and whenever the organizations turns out in parade is there.

HURT IN COLLISION

Dover, Pa., Nov. 5.—Slippery rails caused by frost and fallen leaves caused a rear-end collision of cars on the Dover trolley line, in which one man was severely injured and five others were hurt. George Swartz, aged 58 years, is hurt the most severely and is confined to his bed.

ATTEND PARTY

Lemoyne, Pa., Nov. 5.—More than 60 persons attended a party given in the Lemoyne High School Auditorium by members of the senior and sophomore classes. The party was given in honor of members of the freshmen and junior classes and their guests.

COUNCIL TO MEET

Lemoyne, Pa., Nov. 5.—Lemoyne council will meet in regular session on Thursday evening in the school house. Nothing but routine business is scheduled for action of the law-making body.

FACTORY RESUMES WORK

Lykens, Pa., Nov. 5.—The shirt factory here has resumed operations. It closed its doors a year ago. It is now under new management in the building which was formerly the opera house.

TWO VETERANS DIE

Columbia, Pa., Nov. 5.—Two colored veterans, Simon Malson, aged 79, and Daniel S. Offord, aged 71, died here within forty-eight hours. Both served in the Civil War.

EXAMINES LEMOYNE PUPILS

Lemoyne, Pa., Nov. 5.—Dr. J. E. Beale yesterday conducted an examination in the interest of the State in the local schools. The physician examined throat, eyes and ears of all pupils.

CAPT. KESSINGER HOME

Lewistown, Pa., Nov. 5.—Captain W. A. Kessinger has arrived in New York after long service in France. Mrs. Kessinger has gone to New York to join her husband.

ANNOUNCE BIRTH OF SON

Lykens, Pa., Nov. 5.—Mr. and Mrs. James Holt announce the birth of a son on October 31. Mrs. Holt was Lois Hensel.

FIREMEN GET LIFE NET

Lebanon, Pa., Nov. 5.—A large life net, to be added to the equipment of the Lebanon fire department, was received this morning at City Hall by Councilman J. Herbert Monbeck, of the Department of Public Safety.

WILL CONFIRM PRISONERS

Huntingdon, Pa., Nov. 5.—On Sunday next the Rt. Rev. James Henry Darlington, bishop of Harrisburg, will visit the Eastern Reformatory, located here, to give the sacred rite of confirmation to many of the prisoners specially prepared and instructed by the Rev. Frederick James Compsonn, the rector of St. John's Church here.

FIX COAL VALUE

Sunbury, Pa., Nov. 5.—Northumberland commissioners yesterday finally fixed the assessments on anthracite coal lands at $117,000,000 for the three years beginning January 1 last. This is an increase of $100,000,000 over the previous three years, and will mean an appropriate increase of 600 per cent. in the tax income in the county.

GETS NEW TEETH AT 50

Waynesboro, Pa., Nov. 5.—R. L. Hess, this city, is cutting a new set of lower teeth. Hess is past fifty years of age, and has been compelled to use a set of false lower teeth for several years. Yesterday he found his teeth were not fitting very good and at the same time discovered three teeth growing.

Personal and Social News of Towns on West Shore

Miss Golda Dimm has returned to Blain after being entertained by Postmaster and Mrs. Blaine A. Bower at Shiremanstown.

Mr. and Mrs. Howard Stare, of Plainfield, visited the former's mother, Mrs. Angelina Stare, at Shiremanstown.

R. Abner Erb, has returned to Allentown after visiting his parents, Mr. and Mrs. Samuel D. Erb, Shiremanstown.

Mrs. Roy S. Weaver, of Harrisburg, visited her sister, Mrs. Mervin Stansfield, at Shiremanstown on Monday.

William Rider and Frank Rider, of Mechanicsburg, were recent guests of the former's sister, Mrs. Noah Heiges, Shiremanstown.

Mrs. John Nebinger, of Shiremanstown, was a Harrisburg visitor on Tuesday.

Mrs. George Gates, of Harrisburg; Mrs. Harry Spahr, of Philadelphia; Mrs. L. R. Zeibe and daughter, Marian Arline, Shiremanstown, were entertained Sunday by Mr. and Mrs. N. M. Spahr, at their home in Mechanicsburg.

Miss Della Flickinger, of Shiremanstown, visited her uncle and aunt, Mr. and Mrs. William Shellhamer, at Miller's Mill on Sunday.

Robert Sponsler, of Ohio, visited Mr. E. H. Bitner at the Bitner farm near Shiremanstown.

Mrs. Florence Cromleigh and two children, of Mechanicsburg, visited the former's parents at Shiremanstown on Sunday.

Mr. and Mrs. George Buttorff and son, George, and Miss Mame Reiff, of New Cumberland, left for Lake Heelen, Fla., yesterday morning, where they will spend the winter.

Mr. and Mrs. Ira Buttorff, of New Cumberland, announce the birth of a son, Joseph Stewart Buttorff, born on Friday, October 31.

T. J. Bard, H. M. Shope and R. M. Peffer, of Washington Heights, motored to West Virginia on Saturday.

Mrs. Edna Kingsbury and son, Franklin, of Washington Heights, spent the week end with friends at Hagerstown.

Mr. and Mrs. John Calaman and daughter, of Churchtown; Mr. and Mrs. Raymond Shoemaker and son, of Mount Holly, were the guests of Mr. and Mrs. Mervin Otto at Washington Heights on Sunday.

The Otterbein Guild of Calvary United Brethren Church gave a Hallowe'en social in the church social room on Tuesday evening after a program in the auditorium.

Dewey Bare, of Marysville, is spending several days hunting at Cly, York county.

Mrs. B. D. Bare, of Marysville, has returned to her home after spending several days at Cly.

Mr. and Mrs. George Himes and Mr. and Mrs. Frank Shaull, of West Fairview, visited friends in Dauphin on Sunday.

West Fairview was well represented at the Enola Home Coming celebration.

HUNTER SHOT IN FACE

Marietta, Pa., Nov. 5.—Henry Hilt, of Manor, while gunning in Myers' wood yesterday, was shot in the face and may be badly disfigured. It is not known where the shot came from.

(Other State news on Page 2.)

TOWN WILL CELEBRATE

Lewistown, Pa., Nov. 5.—Armistice Day, November 11, will be celebrated here with a glorious good time, as one enthusiastic ex-service man expressed it.

LUTHERANS TO MEET

Spring Grove, Pa., Nov. 5.—The York County Lutheran Conference of the West Pennsylvania Synod will convene November 10 to 12, in Christ Church of the Muhlenberg Lutheran charge, this place.

ESTABLISH DRILL RECORD

Lemoyne, Pa., Nov. 5.—Pupils of the borough schools established a new fire drill record when the building was cleared of 370 pupils in 58 seconds. Miss Edith Mumma, principal of the school, has been drilling the pupils.

SORE THROAT or Tonsilitis, gargle with warm salt water, then apply—

VICK'S VAPORUB "YOUR BODYGUARD" - 30¢, 60¢, $1.20

Be one of the thousands who travel this winter to the *Land of Green and Gold*-

CALIFORNIA

Enjoy the great outdoors under summer skies.

Take the family with you.

Choose the surroundings you like best—city or rural.

Live within your income, and at the same time escape zero weather.

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En route visit the National Parks, National Monuments and other winter resorts. See Hawaii, too.

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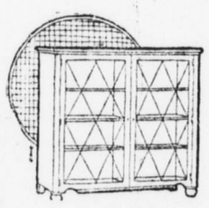
49-W UNITED STATES RAILROAD ADMINISTRATION

Of All Things To Be Purchased for Xmas Furniture Should Be Bought Now at Present Prices

Any Article Bought Now Can Be Held for Later Delivery. Delays Are Costly. Prices Are Going Up.

A TEA WAGON—is an always appreciated gift. Make your Christmas selection now while our stocks are complete. We show the largest assortment in this city—of Mahogany, Walnut and all finishes in Wicker—Many have drop-leaves.



BOOKCASES and Desks always make some persons happy on Christmas. An inspection of our stocks at this time will be very profitable to you. We've an almost endless variety to select from.

THE Sofa Table is more popular than ever this year—more people are appreciating it as a wonderfully convenient piece of furniture.

Here you will find every period design and size at a price to suit your purse.

Why not have one put aside for Christmas?

Now, when you are thinking of Christmas Gifts, don't fail to visit our Kenilworth Gift Shop on our second floor. We've a host of exclusive gift things that will surely please you.

GOLDSMITH'S

Central Pennsylvania's Best Furniture Store
NORTH MARKET SQUARE

Remember: By arrangement with the owner the undersigned has created an unparalleled opportunity for you to own your own home — a home any family can be proud of. — STOP PAYING RENT — PUT YOUR SAVINGS IN YOUR HOME — START NOW. Here is your chance, houses ready to occupy are scarce—get down to business.

SALE
Friday Nov. 7th
AT
2:30 p. m. Sharp

Don't Forget

The man who started today—by tomorrow is ahead of the fellow who starts tomorrow — There is no charge for information, particulars are given you gladly.

GET BUSY — ACT — DO IT TODAY

10 Brand New Homes---For 10 Thrifty Families

Seven Rooms BRICK-STUCCO HOUSES, Hardwood Floors — Chestnut Finish — Steam Heat — Gas — Electric — Cemented Cellar — Hot and Cold Water in Cellar — Front and Rear Porches — Drive Alley — Nice Front Lawn and Large Back Yard.

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