

THE LOGIC OF THE TIDES.

Rising Fifty Feet in the Bay of Fundy and Five Feet at New York.

A correspondent, who signs his letter with the initials E. B., asks the New York Sun a number of questions about the interesting subject of the tides. Among other things he wants to know what causes the tides, and whether a tidal wave enters the eastern end of Long Island Sound and another at the Narrows at the same time, and, if so, where the two waves meet. He has noticed that on a certain date high tide at Sandy Hook occurred in the afternoon twenty-three minutes more than twelve hours after it occurred in the forenoon, while at Hell Gate the evening tide was twelve hours and thirty-four minutes after the morning one, although the tide was raised eleven minutes more at Hell Gate than at Sandy Hook. He wants to know why this was so. He has heard that the difference between high and low water at St. John, N. B., or that rise of the tide at that place is thirty feet, while in New York it is only four feet, and he wants to know why that is so.

The rise and fall of the tide, that is, the elevation and depression of the surface of the water of the ocean and the bays and tributaries that empty into it, are due in general to the attraction of the sun and moon on the earth. The surface of the earth that is nearest to the sun and moon, when the two are in line on one side of the earth, is attracted more strongly toward those bodies than the center of the earth is, because the surface is nearer to them than the center is; the center is attracted toward them more strongly than the further surface of the earth is for the same reason. These great heavenly bodies are constantly pulling the earth toward them, and the particles of water in the sea on the side nearest are affected so much by this influence that they are heaped up as if embowed by it off toward the sun and moon that is pulling them. But the center of the earth being attracted more strongly than the further surface, the water on the further surface is heaped up because the earth falls away from it as it drops from the straight line of a tangent through the center of the earth. The water on the further side of the earth comes dragging on behind, much as a whip-lash follows the whip-stick that is waved through the air, while the water on the near side of the earth is heaped up as if on a hill because the earth falls away from it as it drops from the straight line of a tangent through the center of the earth. The water on the near side of the earth is heaped up as if on a hill because the earth falls away from it as it drops from the straight line of a tangent through the center of the earth. The water on the near side of the earth is heaped up as if on a hill because the earth falls away from it as it drops from the straight line of a tangent through the center of the earth.

It regularly happens every month that the moon is on one side of the earth and the sun on the opposite side pulling the water toward it, instead of both being on one side. The effect of this is much the same on the water as when both are on one side. It is on such dates as these—namely, when there is a full moon and when there is a full moon and when there is a full moon—the tides rise highest; the moon and the sun both work together in heaping up the water. But at the first and third quarters of the moon the sun and the moon work against each other. The heaping of water in the sun is pulling along after it as it is apparently traveling around the earth counter to just as the moon is trying to drain its location one-half the way around to the opposite side of the earth. The consequence is that the sun's heaping of water partly fills up the depression caused by the moon. Where the moon is heaping up the water the sun is heaping it away, and the consequence is that the tide levels are neither so high nor so low at such times in the month as they are when the two great luminaries work together. The high tides of the new and full moon are known as the spring tides; the low tides of the first and third quarters are called neap tides. The moon, it is observed, always gets the best of the sun when the two are not working together. This is due to the nearness of the moon to the earth. Although the sun is many times larger than the moon, the moon exerts more than twice as much power on the water. But this power is modified in various ways. The sun may be on one side of the equator and the moon on the other side of the equator and the earth. They would not then pull together quite as well as when both were on one side of the equator and in a right line. The earth may be very near to the sun, as it is in January, which would increase the relative influence of the sun or it may be far away, as it is now, when the moon is relatively more powerful. Then the moon is in its distance from the earth, too, and this tends to complicate matters.

Then there are influences local to various parts of the earth that vary the rise and fall of the tides. Thus, if for a couple of days or so when the spring tides are on, there should prevail a strong southeast wind, the water in New York would be heaped up so that ferry passengers would feel as if they were climbing stairway when they went up the bridges to the boats, while all the rigs along the South and West streets would get drowned out.

New York itself is pretty well situated for high tide, but not so well as Boston, and not nearly so well as St. John, N. B., although the rise of the tide at St. John is but sixteen feet instead of thirty. The correspondent had heard that if any one will look at a map of Florida, Florida will be seen that Florida is Cape Hatteras the land sweeps in forming a very long shallow bay, with Savannah along the head of the bay. North of this there is another bay, of which Hatteras may be called one headland and Xantuxet Island another. New York is in the high, or at the lower end, of Florida rises less than two feet, but at Savannah it rises seven and a half. From Cape Hatteras it rises a little over two feet, and at New York about five and a half. From these figures it appears that as the tidal wave crosses the ocean it is probably only about two feet high, but as it sweeps along to the shores of the continent it is very much magnified, and the wave is compressed from each end; and the volume of water that is traveling in being but little reduced, it must of necessity rise higher as it becomes compressed. There are bays and gulfs where the tidal wave is compressed very rapidly. St. John is on such a bay. At the head of the Bay of Fundy the tidal wave runs in unobstructed, but much compressed, until the flood tide reaches the enormous height of fifty feet, when the sun and moon pull together the best they are able. The result is a very rapid rise of the water, and the friction of the land serving to hold the water back.

Venous travelers who have been to the Bay of Fundy say that the hopes of the natives feel indignantly on the tides in the bay that are exposed at low water, and yet never at the tides that cause the tides to run so furiously to save their lives when once the water rises in that they

A FEW PUZZLES.

Some Curiously Addressed Letters that Come to New York.

In the New York postoffice there is an envelope whose name is Stone, but who appears to be living in the local postoffice. He has answered to that title for thirty-one years, but his eyesight is as keen as a falcon's. It is partly because of his keenness of vision, and partly because of the remarkable aptitude he has developed for deciphering cryptographical devices on letters that he has been given the title, more correctly expressed, would read, "The Man Who Deciphers Blind Directions."

The work of the Blind Man has now grown so large that a half dozen assistants are kept busy poring over directories of all the principal cities of this country and Europe. Lists of firms, individuals and streets are also looked through. These have accumulated during a third of a century, but the directories are mostly old, as the government is too parsimonious to provide new directories upon requisition. The "blind department" received in the last fifty days weight, amounting to which the regular clerks could do nothing with.

A blind man and his assistants have studied out 2,000 blind directions in ordinary letters in one day. Those that cannot decipher are sent to the dead letter office at Washington. Most of the letters that are brought in by the blind men are from New York and other large cities. Assistant Postmaster Taylor says, are the most frequent sinners. Hundreds of letters come from Brooklyn every day to New York that are intended for parties in Brooklyn, but only New York has registered letters, the names on the face of the envelopes. Bank people sometimes very careless writers, and their letters go astray often because the direction looks like something for which it is not intended. Not long ago, a letter sent by a country lady to a city bank, and containing \$70,000, did not turn up. It was directed "J. E. Perkins, Cashier, N. Y." It was sought in vain for many days, until at last Mr. Gaylor, in looking closely at the writing of the cashier that directed the missing letter, surmised that his "Cashier" might have been mistaken for Caskin, and sure enough upon writing to the Caskin postoffice that proved to be the case, for the letter was lying in the pigeon-hole of that office awaiting call.

Another letter had such a clumsily written Yonkers upon its face that it did not reach that city, only fourteen miles away, until it had been to Turkey and back. Another instance of careless writing that made much amusement for an interested English nobleman was on a letter intended for J. Smith, Des Moines, Iowa. The letters were run together so curiously that they were supposed to read "Delmonico's Town." It was sent to the great restaurateur, and remained with him until Delmonico sent it back with the remark that J. Smith did not board with him.

A favorite style of directing with foreigners seems to be of this order: "Solomon, merchant tailor, clothes cleaned, repaired and altered, 122 Madison Avenue, America." Another read: "Herrn George Wolf, bought of James Krink, dealer in staple and fancy groceries, fruits, vegetables, oysters in season, No. 1,015 West Seventeenth st., Cor. Rudolph." These were copied from billheads, and give everything except the most essential part of all, the name of the place.

Very few know in how many ways Pennsylvania can be spelled. Here are a few specimens: Pennavain, Penselme, Pencylvania, Pen S. Vema, Pensylvania, Penselvaia, Pennalvea, Pennsylvania, Pennsilvaia, Pennsilvaia, Penselvaia.

Here are a few occasional spellings: Biford for Ocean Beach, N. J.; Mississipi for Minnesota, Dacotay, for Passaic, New Jersey, New Gerti and New Gerty for New Jersey, Oio and Ohio for Ohio, Sirakus for Syracuse.

An envelope has this: "I shall ask you to please send back the letters I received when not at home and which I don't get." The writer, a young man, writes in English for tell you what I mean. Have I sent you letter on Swiss paper to Mr. by the factory of the U. S. in Jersey City. He will my mouthpiece be with you."

How Ought to Carry a Bell-Punch

"I tell you what," said a suburban friend to the Listener, as the street-car conductor came around bearing a particular big and imposing bell-punch, "there is a deacon in our church who ought to be made to carry one of those things when he makes his collection, if ever anybody ought to be made to wear one."

"I'll tell you the whole story, and when I've done I want you to know whether if it had happened to you, it wouldn't have destroyed your confidence in somebody. You see, I live next door to Deacon Sharply, and my yard is separated from his by a high picket fence. I was shuffling away at the grass on my little lawn the other night with a grass hook; I was just finishing the job, and wondering whether I should ever be rich enough to sell out with a lawn mower, when the deacon came out and leaped over the fence. 'See here,' said he, 'you are getting into a tight horn, and you'll be in it. We don't either of us have quite enough business for a lawn mower, but together we might have. Say we go snooks on one?' I told him I thought it was a good idea, and would go along on a machine. He said he would manage the purchase, and would tell me how much he had the cost was, so I let him go on and buy the lawn mower, and he brought a receipted bill for \$125.00 in his own name. I gave him the \$25, and left the machine and receipt in his hands.

About two weeks after that—I'd seen the deacon shoving the lawn mower around in his yard in a great style in the meantime—I thought my grass got up enough to warrant cutting, and I went to the deacon to get the machine. The deacon was out, they said, but the lawn mower was down at Mr. Smith's. I thought it was a little queer that the deacon should have the lawn mower, but I went to Smith's and got it. I thought he looked a little queer when I took it, but I took it just the same, and mowed my lawn. Next night the deacon came and got it again, and showed away a while in his back yard. A few days after that I thought it was about time to move one more, and went over to the deacon's after the machine. No machine anywhere around. I asked at the back door—'Where's the lawn mower?' 'Mr. Smith came and got it a little while ago,' said the deacon's daughter. 'Mr. Smith? What business had he with our machine? I don't think but I trotted it to Smith's. I found Smith occasionally offering the lawn mower, and apparently getting ready for action. 'Well,' said I, 'I came over after that lawn mower, and as you seem to be getting ready to use it, I suppose I have to wait.' 'Hain,' said he, 'I guess the deacon and I keep it busy.' 'So, it seems,' says I, kind of sarcastically. 'Well, we will get our money's worth out of it, you know,' says he. 'That struck me as a mighty queer remark, and I couldn't help saying, 'I should think you'd want to get your ownself.' 'Well,' said he, looking up a little surprised. 'I own half of this one.' 'You own your own half of this?' says I, astonished. 'Why, certainly,' says he; 'Deacon Sharply and I bought this lawn mower together.' I tell you, that took me completely out of the deacon had villainously played us off one against the other, and had got me to pay for one half of the machine, and Smith the other, calculating to get the use of it to now all his own grass for nothing. If he had been cautious as he was sharp, and kept the machine in his own barn, or else insisted on going after it himself, I suppose he would have kept on a going that way. But since we have found it out Smith and I get along first rate, but the deacon has to hire an Irishman to mow his grass with a scythe.

And that is the reason why I think the deacon ought to carry a bell-punch when he makes his collection. There is a deacon in our church who ought to be made to carry one of those things when he makes his collection, if ever anybody ought to be made to wear one."

Staking Out His Claim. A slim young man was perched on a stool in one of the large restaurants near the Tribune building devouring a black-berry dumpling. The capacity of the restaurant was not sufficient for the rush of customers, and behind the waiter, who was a possessor of stooped form and a line of hungry candidates glaring over the shoulders of the eaters and watching each mouthful disappear. Behind the slim young man, however, four hungry eyes watched the vanishing fragments of black-berry dumpling. There were two constants for the seat—a congenial old man in spectacles and a tall man with a silk hat.

The slim young man, completing his lunch, climbed down from his perch, and the congenial waiter, with great activity, began to climb up. 'Hold on,' said the other candidate gruffly. 'What for?' 'Because, sir, I have a right to the seat. I was here, sir, when that young man began to eat his dumpling. Perhaps,' added the tall man, scornfully, 'you think that I have many standings here just to count how many dumplings there are in a black-berry dumpling.' The elderly man laid his hand on the stool and said, with the confident air of one who holds four aces: 'I am very sorry, sir, but you really do not have a claim at all. I was here when this young man was unable to decide whether he wanted a black-berry dumpling or not.' And then the patient old man, having 'seen' the tall man and gone him one better, climbed upon the stool, and his rival moved slyly along to stake out another claim on a man who had just ordered fish balls with tomato sauce.—Chicago Herald.

Get rid of that tired feeling as quick as possible. Take Hood's Sarsaparilla which gives strength, a good appetite, and health. Catarrh, curd, health and sweet breath secured by Shiloh's Catarrh Remedy. Price 50 cents. Nasal Injector free. Sold by Geo. W. Benford & Son.

Sleepless nights made miserable by that terrible cough. Shiloh's Cure is the remedy for you. Sold by Geo. W. Benford & Son.

Slow milkers are a detriment. The best cow will soon deteriorate under the unimprovement of a slow or lazy milker. Croup, Whooping Cough and Bronchitis immediately relieved by Shiloh's Cure. Sold by Geo. W. Benford & Son.

That Hacking Cough can be so quickly cured by Shiloh's Cure. We guarantee it. Sold by Geo. W. Benford & Son.

That Tired Feeling

The warm weather has a debilitating effect, especially upon those who are within doors most of the time. The peculiar, yet common, complaint known as "that tired feeling," which gives new life and strength to all the functions of the body.

"I could not sleep; had no appetite. I took Hood's Sarsaparilla and soon began to sleep soundly; could get up without tired and languid feeling; and my appetite improved." E. A. BARSTOW, Kent, Ohio.

Strengthen the System. Hood's Sarsaparilla is characterized by three peculiarities: 1st, the combination of remedial agents; 2d, the proportion; 3d, the process of securing the active medicinal qualities. The result is a medicine of unusual strength, effecting cures hitherto unknown. Send for book containing additional evidence.

Hood's Sarsaparilla tones up my system, purifies my blood, stimulates my appetite, and seems to make me over." J. P. THORNTON, Register of Deeds, Lowell, Mass.

Hood's Sarsaparilla beats all others, and is the only one that can be taken with food. Sold by C. H. DRUGGIST & Co., Lowell, Mass. 100 Doses One Dollar.

FASHIONABLE CUTTER and TAILOR. Having had many years' experience in all branches of the Tailoring business, I guarantee satisfaction to all who may call upon me for my services. WILLIAM M. HOCHSTETLER, Somerset, Pa.

The Old Reliable Schuttler Wagon. Established in Chicago in 1842. I have just received two cars of the SELF-ROLLING, STEEL-SKIN SCHUTTLE WAGONS, the most complete Western Wagon in the market for Road or Farm Purposes. On the SCHUTTLE WAGON there is a Rear Bumper, a Self-rolling Wheel, a something that makes the wagon so necessary when handling on hilly farms. Every part of the Wood-work of this wagon has laid in Stock three years before being worked up, insuring the work to be thoroughly seasoned before being bound. By the patentees of the

DOUBLE COLLAR AND OIL CUPS. It is the only Wagon make that has this improvement. It avoids the necessity of taking off the wheels to grease, as in the old style; by simply turning a cap the wagon can be oiled in less than five minutes. This Wagon wants to be seen to be fully appreciated, and parties wishing to buy will do well to see it before purchasing elsewhere.

Every Wagon Fully Insured. In offering this make of Wagon to the public, we say I used the same make of Wagon for five years when freighting across the Rocky Mountains, over roads that were almost impassable, and they always stood the test. I feel warranted in saying I believe them the best Wagon on wheels. Call on Oliver Knapp or Henry Highly, who will show you the Wagon.

Agents Wanted Throughout the County. PETER HEFFLEY. SOMERSET, MARCH 28, 1885. THE SOMERSET HERALD. Established 1827. Is the Oldest Paper in the County. IS PUBLISHED EVERY WEDNESDAY MORNING. 52 NUMBERS EACH YEAR. IS RED HOT REPUBLICAN. Is Read by the Best Class of People. Is the Best Advertising Medium. HAS A BONA FIDE CIRCULATION DOUBLE THAT OF ANY OTHER PAPER PUBLISHED IN THE COUNTY. It Contains all the County News. Has all the County Advertising. Has all the Legal Advertising. It has connected with it one of the BEST JOB OFFICES in Western Pennsylvania. Does all kinds of Job Work with Neatness and Despatch at PRICES THAT DEFY COMPETITION. Terms, \$2. per Year in Advance. For prices for Advertising or Job Work, call on or address, THE HERALD, SOMERSET, PA.

THE AMERICAN MAGAZINE.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

THE AMERICAN MAGAZINE.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

THE AMERICAN MAGAZINE.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

BEAUTIFULLY ILLUSTRATED. This Magazine portrays American thought and life from ocean to ocean, is filled with pure high-class literature, and can be safely welcomed in any family circle.

RAILROAD TIME TABLES.

BALTIMORE & OHIO RAILROAD—SOMERSET & CAMBRIA BRANCH. DISTANCE AND FAIR.

SOMERSET TO HOVERVILLE. 12 1/2 Miles. 1 1/2 Hours. HOVERVILLE TO SOMERSET. 12 1/2 Miles. 1 1/2 Hours.

NORTH-BOUND TRAINS. JOHNSTOWN EXPRESS—No. 14. BALTIMORE 7:00 A.M. HOVERVILLE 7:25 A.M. SOMERSET 7:50 A.M.

SOUTH-BOUND TRAINS. BALTIMORE MAIL—No. 32. HOVERVILLE 7:00 A.M. SOMERSET 7:25 A.M. BALTIMORE 7:50 A.M.

WEST-BOUND TRAINS. JOHNSTOWN EXPRESS—No. 14. BALTIMORE 7:00 A.M. HOVERVILLE 7:25 A.M. SOMERSET 7:50 A.M.

WEST-BOUND TRAINS. JOHNSTOWN EXPRESS—No. 14. BALTIMORE 7:00 A.M. HOVERVILLE 7:25 A.M. SOMERSET 7:50 A.M.

WEST-BOUND TRAINS. JOHNSTOWN EXPRESS—No. 14. BALTIMORE 7:00 A.M. HOVERVILLE 7:25 A.M. SOMERSET 7:50 A.M.

WEST-BOUND TRAINS. JOHNSTOWN EXPRESS—No. 14. BALTIMORE 7:00 A.M. HOVERVILLE 7:25 A.M. SOMERSET 7:50 A.M.

WEST-BOUND TRAINS. JOHNSTOWN EXPRESS—No. 14. BALTIMORE 7:00 A.M. HOVERVILLE 7:25 A.M. SOMERSET 7:50 A.M.

It Will Be Glad Tidings to the LADIES

TO KNOW THE GREAT IMPROVEMENTS IN SEWING MACHINES, ESPECIALLY OF THE WHITE

SELF-THREADING. Keeps the eye of the needle. A perfect power take-up without a check spring. A perfect self-threading shuttle.

STITCH REGULATOR AND INDICATOR. By which any stitch can be made to depth, equal without experimenting.

AUTOMATIC BOBBIN-WINDER. By which a bobbin can be wound as soon as a spool of thread is used, and the thread is in the bobbin in less than a minute.

LIGHT AND QUIET RUNNING. Qualities, and of this measure variety of stitching and needle work can be done on this machine.

JOSEPH CRIST, Agt., Jenner X Roads, Somerset Co., Pa.

BUY YOUR CANDEE RUBBER BOOTS AND SHOES. John G. Sanner, Somerset, Pa.

HOP OINTMENT. Cures all kinds of skin diseases, including scabies, eczema, and other eruptions.

ELLY'S CREAM BALM. Cures colds, coughs, and other respiratory ailments. Also used for rheumatism and other pains.

A CYCLOPE GALVANIC OIL. A powerful medicinal preparation for various ailments, including rheumatism and neuralgia.