

On June 28, 1626, a cod-fish was brought to Cambridge market, which, upon being opened, was found to contain a book in its stomach. The book, though wrapped in a piece of sail-cloth, was much soiled, and covered with slime. It contained several treatises on religious subjects, written by one John Frith. It was reprinted by the authorities of Cambridge University, and has a woodcut representing the stall in Cambridge market, with the fish, book, and knife. How the book got into the fish is not told.

THE ANENOGRAPH.

AMONG the scientific novelties exhibited at the meeting of the British Association which has just concluded its session at Birmingham, there was an instrument invented and patented by Mr. S. B. Howlett, of the War-office, by means of which winds, from the gentlest breeze up to the most furious storm, can be made to record their own direction and force in the form of a diagram on paper. In other words, the instrument has only to be set up in an exposed position, and left to itself during the continuance of a breeze or storm, and it will present an observer with an accurate map, drawn to a scale, of what the winds have been doing. Their direction is shown to a degree, and their strength is measured to half an ounce, and this with unerring precision.

Our readers have first to picture to themselves a box of stout tin or zinc in the shape of a pyramid. Through an opening at the apex or point of the pyramid a long tube passes, which reaches within two inches of the bottom of the box; it is slung, however, by an apparatus called on board ship a *gymbal* to a collar in the opening, and the nature of this *gymbal* being something that of a universal joint the rod or tube hangs freely, and will swing like a pendulum, only with this difference, that it will swing in any direction. To the lower end of this tube, a weight of lead is fixed, so that it takes considerable force to move the pendulum from a perpendicular position, and we would have our readers bear in mind that very much more force is needed to move the pendulum, far from the perpendicular than to move it a little way. Thus Mr. Howlett thought that if he could in any way get the winds to move his pendulum, they would make it swing as their strength permitted; and he could record that, how far and in what direction the pendulum swung, he could find out how strong the wind was, and which way it blew. Accordingly a sphere was fixed to the top part of the tube, outside the box, for the winds to blow against, and so move the swinging weight; and a weighted pencil was dropped into the tube, which, moving with the tube, and sliding out by its own weight just as far as was necessary, marked on a piece of paper exactly how far and in what direction the pendulum moved. Here was a solution of the main part of the problem. Further, Mr. Howlett found that, in obedience to a law known to natural philosophers, a sphere intended to represent to the air-currents an effective resisting surface of one square foot must be made, so as to have what is called a *great circle* of two square feet; and he has accordingly provided for this. Thus supposing we want to ascertain the direction of the wind and its pressure on a square foot, we should have only to put on a globe with a great circle of two square feet; and having then set one side of the square base of the instrument on the meridian, and put a sheet of paper under the pencil, we should have to do no more than leave the instrument for a minute, an hour, or a day, just as we might choose; and on going to look at its doings it would present us with a series of looped lines, showing at once, by their direction, the quarter from which the wind had been blowing, and shewing also, on the application of a scale, its pressure in pounds and ounces.

The whole instrument is made of a convenient size for use, on a portable tripod stand, and is proposed by its inventor not merely as an observatory instrument (though well adapted, for such a purpose), but, as it were, as a field instrument, by means of a few of which at different stations, the actual course and the lines of greatest violence of a storm, or even of a light wind might be unerringly laid down.

PASTIMES.

DECAPITATIONS.

1. Behead a dye-stuff, and leave a poisonous reptile.
2. Behead a precious gem, and leave a title of nobility.
3. Behead a river in Europe, and leave one of the books of the Old Testament.

CONUNDRUM.

Why is Neptune like a man looking for the philosopher's stone?

REBUS.

1.

Five letters compose me; there's really no knowing how much of your comfort to me you are owing.

Though under control, I'm so potent—(don't doubt me).

That Science and Art would be crippled without me.

Behead me, and to! the result of that course is I'm now representing a waggon and horses.

Now cut off my tail, and you'll find yourself able to place me in this shape at eve on your table.

When, strange though it seem, it is perfectly true, My original self may be present there, too.

2. I am a word of six letters; cut off my head, and I am a portion of the globe; again cut off my head, and I am a numeral; cut off my tail and transpose me, and I am a negative; my whole is an atmospheric disinfectant.

CHARADES.

I am composed of 13 letters; my 1, 9, 10, 7 is a portion of the earth; my 3, 2, 4, 5, 13 is a rich fabric; my 12, 11, 3, 5, 8 tends to elevation and refinement; my 1, 3, 2, 10, 6 is a sacred song; my 5, 4, 7, 6 is what a reporter delights in; my 7, 10, 9, 1, 7 is what young ladies sometimes do; and my whole is intended to combine instruction with amusement.

ANAGRAMS.

1. A line from Shakespeare.
1. Tiroa chet thwei eth urpm edf yoonnr irse.
2. Grotfe lte ltsua fo ltores adn ceebmrr ryuo own.
3. A fsto sewnra buttne anwy hrtaw.
4. A water to thrive.
5. Not me dear.
6. No stop it rains.

TRANSPOSITIONS.

1. MTARFARISERONG. Is attracting the attention of the civilized world.
2. OHBNOREAOTREHNDIF. Extends to both sides of the Atlantic.
3. TNLSESNMOMUNEO. No credit to Montreal.

ARITHMETICAL PROBLEMS.

1. Two persons, A and B, have both the same income; A saves one-fifth of his income yearly; but B, by spending £50 per annum more than A, at the end of four years finds himself £100 in debt. What is their income, and what do they spend per annum?
2. Find three numbers such that the first, with the cube of the second, may be 35; the third, with the cube of the second, 29; and the sum of the three cubes, 547.
3. "WILLIAM" desires us to place the following proposition before our readers; the question is a practical one to him, and he hopes that some of our friends will furnish him with a correct answer: Suppose I deposit \$8.33 in a Savings Bank on the first day of every month for the term of six years, what will the principal and interest amount to at the expiration of that time; interest to be calculated at 4 per cent. per annum, and compounded yearly?

ANSWERS TO PUZZLES, &c., No. 8.

ARITHMETICAL QUESTIONS.

1. 16.
2. 21.
3. The father's age was 48; the son's, 21.

RIDDLES.

1. Because it professes to make one of two, but it is only a pleasing delusion.
2. With a ring, but not without a rap.
3. Because there are two C's (seas) in Pacific, and only one in Atlantic.

PUZZLES.

The son of the host.

CHARADES.

1. Cartier.
2. McDonald.

ANAGRAM.

Truth is a heavenly principle—a light Whose beams will ever guide the willing right: A fixed star—a spotless central sun, In the mind's heaven unchangeable and one.

The following answers have been received:

Arithmetical Questions—All, Geo. J. B., E. R. A., X. Y. Z., H. J. M., W. J. F., Peter, Nemo, S. E. F.; 1st and 2nd, W. H. F.; 2nd and 3rd, Thos. G. *Riddles*—1, Q. E. D., Nemo; 2, Q. E. D., S. E. F.; 3, Peter.

Charades—Peter, Themistocles, Nemo, Q. E. D., F. B., Artist, G. J. B., E. R. A., X. Y. Z., H. J. M., W. J. F., W. H. F., Thos. G., S. E. F.

Puzzles—Thos. G., W. H. F., X. Y. Z., E. R. A., Geo. J. B., Nemo, Peter. (Several incorrect answers have also been received.)

Anagram—Peter, Nemo, F. B., Geo. J. B., X. Y. Z., W. J. F., Thos. G., E. R. A., S. E. F. (Several write "eternal" in the third line, instead of "central.")

The following did not reach us in time to be acknowledged in our last number:—Thos. G., Themistocles, W. J. F., A. A., Oxon, J. Logan.

SCIENTIFIC AND USEFUL.

A NEW remedy for toothache has been announced, namely, carbolic acid, which is said to be an effectual cure; and dentists are recommended to apply it to decayed teeth before stopping them.

PROFITABLE INGENUITY.—A Mr. Perry, of Yeovil, Somerset, exhibits in the Bristol Industrial Exhibition a model of a church, with a peal of bells and miniature ringers, and several small cases containing mechanical figures, railway trains, &c., the whole of which, before they can be set in motion, severally require that a halfpenny shall be dropped into the till. These working models are very attractive, and it is estimated that several pounds are dropped into the tills in the course of the day. There are eleven of these mechanical figures all belonging to the one man, and it is thought that he is clearing from £10 to £15 per day.

PETROLEUM AS FUEL.—The petroleum boiler at Woodwich Dockyard, lately experimented with, is now undergoing considerable alteration, in order to assimilate it more to the simple form of the present marine boiler. The long course of experiments under Mr. Richardson's supervision at Woolwich has proved the system to be not only available, but utterly free from danger; the experiments are now to be carried on with greater vigour. When the alterations are completed the boiler will be able to burn the Rangoon, Barbadoes, or Trinidad petroleum, together with the English coal and whale oils alternately, as well as every other kind of hydro-carbon, to obtain any degree of speed that may be required, and without waste.

The *Moniteur* publishes some statistics of the manufacture of beet-root sugar in France for the season of 1864-65, ending July 31 of the present year. At that date 398 manufactories were in operation, against 366 in July, 1864, and the quantity of sugar produced was upwards of 146,000,000 kilos, an increase of 39,000,000 kilos on last year's yield.

A USEFUL little instrument, called by the inventor a "Topograph," has recently been patented by Mr. Leady, of Sanbury. It combines a plane table, prismatic compass, level, and clinometer, and seems to be well adapted for making rapid sketch-maps possessing a considerable amount of accuracy, for military or other purposes, where there is not sufficient time for a more extended survey.