

## LETTERS TO THE EDITOR.

\*.\* Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.

## Electric measuring apparatus.

In the *American journal of science* for March, Professor Trowbridge describes a form of differential cosine galvanometer, in which the action on a magnet of a strong current, moving through the fixed vertical circle of a large tangent galvanometer (of one metre radius), is balanced by the opposite effect of a weak current from a Daniell cell moving in a reverse direction through the coil of a cosine galvanometer, the fixed and movable coils having a common centre. By moving the coil of the cosine galvanometer about its horizontal axis, it is easy to secure a balance, and thus to determine the magnitude of the strong current. An obvious and simple modification of this apparatus consists in substituting for the cosine galvanometer an ordinary tangent galvanometer, with a coil of small radius having a number of turns of wire in circuit with a battery and rheostat. By varying the resistance in the circuit, a balance can be reached, and the strength of the current found. A mirror galvanometer thus arranged, and in direct circuit with a battery and very high resistance, or in derived circuit with a battery and tangent galvanometer, might sometimes be useful, as in studying slow variations in strong currents. Another instrument, which is likely to prove valuable for measuring strong currents, is a new form of differential cosine galvanometer, recently devised by Mr. R. H. Pierce, while a student at the Massachusetts institute of technology. The current is caused to pass in opposite directions through two concentric circles of nearly the same radius, as in Brackett's differential galvanometer; but the inner of these is capable of moving upon a horizontal axis, as in the ordinary cosine galvanometer, and it is revolved until a convenient deflection is secured. A simple formula then gives the strength of the current. CHAS. R. CROSS.

## The magnetic declination in 1728.

I notice, in your issue of Sept. 18, a note, over the signature 'C. A. S.,' criticising certain statements in regard to the northern boundary of North Carolina, contained in bulletin No. 13 of the U. S. geological survey. A more careful perusal would have shown the writer that the points criticised are contained in an extract from 'Geology of North Carolina,' by Prof. W. C. Kerr, 1875, and that the author of the bulletin is not responsible for them.

HENRY GANNETT.

Washington, D.C.,  
Sept. 21.

## Composite portraiture.

Shortly after the publication of my article on 'Composite portraiture' (*Science*, Aug. 28), my attention was called to an article by Mr. W. E. Dekenham in the *Photographic news* of April 24, 1885, wherein is figured an arrangement for combining optically more than two photographs, which corresponds very nearly with what I had in mind when I penned the last sentence of my article. I have since thought of other methods of solving the problem, but have not had the opportunity of putting them to a practical test. I was glad to find in the same journal (April 17) that Mr. Galton had been giving his attention to the same subject. He says, "There is nothing respecting composites that I should more

gladly hail than the invention of a simple optical method of combining many images into one, so as to judge of the effect of a photographic composite before making it."

I also omitted to refer in my article to an important application of the stereoscopic method of combining two images; namely, in getting the composite of two other composites, as Mr. Galton does in his 'Inquiries into human faculty' (frontispiece), and more recently, in his composites representing the Jewish type. JOSEPH JASTROW.

Philadelphia, Sept. 18.

## Lower Silurian fossils at Canaan, N.Y.

The words 'these limestones,' in the report of Professor Hall's remarks on my paper at the Ann Arbor meeting of the American association, published on p. 220 of *Science* for Sept. 11, seem to imply that Professor Hall claimed to have known forty years since of Lower Silurian fossils in the Taconic limestone of Canaan, Columbia county, N.Y. In a recent letter to me, he states, that, in the expression, he had no intention of implying that he knew at that time of fossils at Canaan; that he referred to his knowledge of fossils at Hoosic, in a limestone which he regarded as of the same age with that of Canaan. The existence of fossils at Hoosic also, forty miles north of Canaan, is additional evidence with regard to the Lower Silurian age of the rocks of the original Taconic system of Emmons. J. D. DANA.

New Haven, Sept. 22.

## Aquatic respiration of soft-shelled turtles.

In your otherwise excellent abstract of our paper on the aquatic respiration of soft-shelled turtles (*Science*, vol. vi. p. 225), not quite enough information is given in the paragraph containing the table to sufficiently explain it. We should be glad to have that paragraph read: "The following table shows the results of the analyses. In the first column is given the total amount of free oxygen taken from the water (10 litres) in ten hours by a turtle weighing 1 kilogram. The second column contains the quantity of carbon dioxide that could be formed from this oxygen; and the third column contains the actual amount of carbon dioxide added to the water by the turtle, the excess of which, over the amount that could be formed from the oxygen taken from the water, is given in the fourth column."

	O.	CO <sub>2</sub> .	Actual CO <sub>2</sub> .	Excess CO <sub>2</sub> .
July 11 . .	71 mg.	97 $\frac{3}{8}$ mg.	231 mg.	133 $\frac{3}{8}$ mg.
Aug. 8 . .	32 "	44 "	212.7 "	168.7 "
Aug. 9 . .	39 "	53 $\frac{5}{8}$ "	168.7 "	115 $\frac{3}{40}$ "

S. H. AND S. P. GAGE.

## AMERICAN FLASH LANGUAGE AGAIN.

SINCE writing the paper on this subject which appeared in *Science*, vol. v., p. 380, I have succeeded in finding another glossary similar to that given by Henry Tufts, about 1798, and included in that paper. I am in-

debted to D. B. Updike, Esq., now of Boston, for the use of a rare pamphlet without a title-page, giving the dying confession of Thomas Mount, then in jail at Newport, R. I., "and to be executed agreeable to my [his] sentence at Little Rest [R. I.] on the 27th of this month of May." The year unluckily is missing; but Mount was born at 'Middletown, East Jersey,' in 1764, being thus eighteen years younger than Tufts, who was born in 1746. Mount, however, served, like Tufts, in the revolutionary army, and was, therefore, to all intents and purposes, his contemporary; leading, moreover, the same wandering and predatory life, and confessing an equal number and variety of rascalities. The date of his list of words may be safely fixed about the year 1800, Tufts' being a few years earlier. It will be seen that they coincide as to many characteristic phrases, while Mount's list is on the whole fuller. I have not altered this glossary in any way, but have designated by an asterisk the words that agree substantially with Tufts's list, and have added a few notes in brackets. I insert also the preface and appendix to the glossary.

I shall be very much indebted to any one who can enable me to fix the precise date of Mount's execution, or of the publication of this pamphlet.

"The Flash company in London (of which Mount, lately executed in Connecticut, was a member) had a language peculiar to themselves, and books printed in that language: Mount says he never saw any of those books; but Williams confessed to the publisher of these papers that he had seen them in London, and one of them in the possession of a J. S—rs, in Jacksonborough, S.C. This language has been taken notice of in some British magazines, but little information communicated concerning it; and therefore, to gratify the public, the following dictionary of the Flash language (so far as could be obtained from Mount and Williams), together with several Flash songs, and the oath they administer to flats (as they call the novices in the art of thieving) when they are admitted into the Flash society, are added.

### *The flash language.*

A man . . . . .	A cove.*
A woman . . . . .	A blown.*
A young woman . . . . .	A young blown.
A young lad . . . . .	A young cove.
A house . . . . .	A ken.
Play house or fair . . . . .	Garf. [Gaff, Dickens.]
Master of the house . . . . .	Cove of the ken.
Mistress of the house . . . . .	Blown of the ken.
Son . . . . .	Young cove of the ken.
Daughter . . . . .	Young blown of the ken.
A gentleman . . . . .	A swell.
A lady . . . . .	A fine blown.
A child . . . . .	A kinlicher.* [Tufts, <i>kinchen</i> .]
Hands . . . . .	Dads.
Eyes . . . . .	Peepers.
Head . . . . .	Nanny.
Nose . . . . .	Mugg.
Mouth . . . . .	Mamma.
A hat . . . . .	A kelp.

A wig . . . . .	A busby. [Rev. Dr. Busby.]
A coat . . . . .	A tog.*
A jacket . . . . .	A javin.* [Tufts, <i>jarvel</i> .]
A shirt . . . . .	A smisk.* [Tufts, <i>smish</i> .]
Breeches ( <i>sic</i> ) . . . . .	Kicksees.*
Stockings . . . . .	Leg-bags.*
Boots . . . . .	Quill-pipes.*
Shoes . . . . .	Crabs.*
Buckles . . . . .	Latches.
Cash . . . . .	Lowr.* [Tufts, <i>lowr</i> .]
A watch . . . . .	A trick.*
A guinea . . . . .	A quid.*
A dollar . . . . .	A wheel.*
Money of any kind . . . . .	Bit.
Bad money . . . . .	Blue bit.
Passing bad money . . . . .	Ringin' blue bit.
Gold in plate of any sort . . . . .	Ridge.
Silver plate of any sort . . . . .	Wedge.
Coppers . . . . .	Maggs.
Silver spoons . . . . .	Wedge feeders.
A horse . . . . .	A pred.* [Tufts, <i>prad</i> .]
A horse-stealer . . . . .	A prednapper.*
A sheep . . . . .	A woolly bird.
A knife . . . . .	A chive.
A pair of pistols . . . . .	A pair of pops.*
A sword . . . . .	A lash.
A crowbar . . . . .	A gentleman.*
A thief . . . . .	A prigg.
A gambler . . . . .	A sharp.
A blanket or sheet . . . . .	A spread. [Tufts calls a saddle a spread.]
A bed . . . . .	A dause.
Dry-goods . . . . .	Chatterry.
Cards . . . . .	Broads or flats.
A pocketbook . . . . .	A reader.
A note of any kind . . . . .	A screen.
Ribbons . . . . .	Dobbins.
Bread . . . . .	Pinum.
Butter . . . . .	A spread.
Cheese . . . . .	Caz.
Victuals of any kind . . . . .	Grub or peck.
Rum . . . . .	Suck.*
Drunk . . . . .	Sucky.
A bottle . . . . .	A glaze. [Tufts applies this word to a square of glass.]
Sugar . . . . .	Pellock.
Tobacco . . . . .	Weed or funk.
Tobacco-smoke . . . . .	Blast of flumer.
Thief's girl . . . . .	Blown spenie, or mush.
To take . . . . .	To hobble.
To lose . . . . .	To sweet.
A goal . . . . .	A quod or a quae.* [Tufts, a <i>qua</i> .]
A goalkeeper . . . . .	A quod or quaeall. [Tufts, a <i>quaekeeper</i> .]
A constable . . . . .	A horney.*
A sheriff . . . . .	A trapp.
A judge . . . . .	A beeks. [ <i>Beak</i> , English slang.]
A clergyman . . . . .	A dull-gown's-man.
The law . . . . .	Pattur.
The devil . . . . .	The crimson cove.
Hell . . . . .	The crimson ken.
The moon . . . . .	Oliver's leary.* [Tufts, <i>Oliver</i> .]
The sun . . . . .	Phoebe.
A fit night for stealing . . . . .	A good darky.
A town . . . . .	A wile.
A vessel . . . . .	A barkey.
Lewd women . . . . .	Cats.
A coach . . . . .	A rattle.
Country people . . . . .	Flats.
The highway . . . . .	Bonny-throw.
Picking pockets . . . . .	Diving.
One that turns evidence . . . . .	A snitch.
One that robs a wagon on the highway . . . . .	A drag.

### *Flash phrases.*

*Peter (a watchword) . . . . .	Somebody hears us. [Tufts, <i>take care of yourself</i> ]; also an iron chest where cash is kept.
Lea (another watchword) . . . . .	Look who comes.
Nose the cove . . . . .	Watch the man, and see where he goes.
Go weed the cove . . . . .	Go speak to the man.
Stow your weeds . . . . .	Hold your tongue.
*I am spotted . . . . .	I am disappointed, somebody saw me. [Tufts, <i>like to be found out</i> .]
Let us sterry . . . . .	Let us make our escape.
Rumble like a miza . . . . .	Wash my clothes.

Knuckling . . . . .	Picking of pockets.
*Doing the cove of a trick . . .	Taking a gentleman's watch.
A snow rig . . . . .	Stealing clothes out of doors.
Taking chatter upon the lift.	Taking goods in the daytime.
*The evening or morning sneak . . . . .	Goods taken early in the morn- ing, or late in the evening.
A scamp . . . . .	Robbing a gentleman on the high- way.
*A dub . . . . .	Opening a door with a false key.
*Cracking a ken . . . . .	Breaking into a house.
*Open a glaze . . . . .	Going in at a window.
Flying the lue . . . . .	Going up or down a chimney.
Knocked down upon the crap,	Condemned.
Turnips . . . . .	Acquitted.
Naptatees . . . . .	A man to be flogged.
Knocked down upon the slum,	A place of confinement, or castle.
I have done the cove out and out . . . . .	I have killed a man.
I have queered the quod . . .	I have broke prison.
*I'm in slangs . . . . .	I'm in irons.
*I'm napping my bib . . . . .	I'm crying.
*Ready to be topped . . . . .	Going to be hanged.

The same pamphlet adds the following : —

"The Oath at the Admission of a Flat into the Flash Society:—

"The oldest Flash cove taking the Flat by the hand, asks him if he desires to join the Flash Company. The Flat answers, Yes. The Flash cove (head man) bids him say thus:—

"I swear by — that to the Flash Company I will be true; never divulge their secrets, nor turn evidence against any of them; and if a brother is in distress, that I will hasten to relieve him, at the risk of my life and liberty; and if he suffers, endeavor to be revenged on the person or persons who were the means of bringing him to punishment.' After taking the above, or a similar oath, the Flat receives a *pall*; i.e. a companion, and they two are sent out upon some expedition.

"N.B. By the confession of Mount and Williams, it appears the Flash Company have spread themselves all over the continent, from Nova Scotia to the remotest parts of Georgia; that the principal seaport towns are their places of general rendezvous; and that the number of the society at present, are from about seventy to eighty, males and females. They have receivers in the principal towns of each State, who not only receive the stolen goods, but point out shops and houses for them to break into and plunder.

"Sometimes they swear by God, and sometimes by the Devil: when they use the name of God, they swear by the Old Cove, who knows all things; and when by the Devil, by the Cove of the Scarlet Ken!"

Henry Tufts mentions no such organization as this, directly or indirectly; but the facility with which he found accomplices and places of concealment everywhere, from Maine to Virginia, would seem to render such a league very probable.

T. W. HIGGINSON.

Cambridge, Mass.

#### AN AVERAGE DAY IN CAMP AMONG THE SIOUX.

On the day designated for a journey every one is astir, while the stars are still shining. Those who sleep late are wakened by the crackling of the leaping blaze. Shadowy forms are moving about the entrance to the lodge,

and the boiling kettle warns the sleepy one that he had better be up and ready for breakfast. To slip out into the cool morning air, to dash the water over the face and hands, and dry them on the tall grass, is the work of a moment; and, with a little shaking together, every one is ready for the morning meal. This is portioned out by the wife, and each one silently eats his share. The baby still sleeps on its cradle-board, but the older children are relishing their broth with the vigor of young life. As each one finishes, he passes his dish to the matron, springs up, and leaves the tent. When the mother has eaten, she too goes out, and, with rapid steps and bent form, passes around the outside of the tent, pulling up the tent-pins used to hold the tent-cloth taut, and throwing down the poles which support the smoke-flaps. If there is an adult female companion, she takes out the round, slender sticks which fasten the tent-cloth together in front. The two women then fold back the cloth in plaits on each side, bringing it together in two long plaits at the back pole; and this is now tipped backward, and allowed to fall to the ground. The cloth is loosened from the upper part of the pole, and rapidly doubled up into a compact bundle. The baby, who has wakened and lain cooing to the rattle of blue beads dangling from the bow over its cradle-board, gives a shout as the sunlight falls in its face, and watches the quick motions of the mother throwing down the tent-poles, thus leaving the circle free of access. It is the leader's tent which first falls as a signal to all the others.

Meanwhile the boys are off with many a whoop, and snatch of song, gathering together the ponies. The men are busy looking after the wagons, or else sit in groups and discuss the journey and the routine of the intended visits, or attend to the packing of the gifts to be bestowed. All visitors are expected to bring presents to their hosts. The younger children run here and there, undisturbed in their play by the commotion. Soon the boys come riding in, swinging the ends of their lariats in wide circles, and driving before them a motley herd of ponies, some frisking and galloping, and others in a dogged trot, none following a path, or keeping a straight line, but spreading out on each side in the onward movement. As they come abreast with the dismantled tent, the women, without any break in their talk, make a dash at a pony, and generally capture him. The animal may, if he is good-natured, at once submit to be packed, two poles on each side, the packs containing the gala dress: bags filled with meat and corn are adjusted like