from there, we went on. It was worse than very wide, and the aries " took the instructions even to those who plain, that the East. From here our sick friend His, improved, and he called Ppuyde which are easternmost point, and dotted into the north-east. Wakefield's we did. We have already said that the affluents has enlarged and enriched our collection of ruins on Nyanza, anyll Dzs, for which we may regret that it has not been chemically worked, as the result is highly interesting. We have not yet received the thirty-seven observations made by the former, but with his own statement concerning the superiority of a "sea horizon" upon an equatorial lake at noon, we must prefer to the data in the cases to which they apply. This land and latitudes differ. Indeed, I am pleased to note that, whereas there was before a difference of sixteen miles, this has been reduced, in the case of one-halt mile; and we may safely predict, when the calculations shall be worked out, that the latitudes will agree better than the longitudes. The alluvial of 3,800 feet must also be considered; and it seem to me that the independent observations being only sixty feet.

Having cleared this portion of his journey, Mr. Stanley's northern base of Lake Nyassa some twenty-five miles further south we may, remark how well his eastern line corresponds, in its meridional direction, with that drawn by Mr. Keith Johnston for the Rev. T. Wakefield's remarkable paper, "Routes of Native Caravans," &c., in the Journal of the Royal Geographical Society, Vol. xli, of 1870; and this leads us to consider the middle and western lakes of the eastern area of Capt. Speke's Victoria Nyassa. Dr. Livingstone heard of four waters, namely, the Okara, the Baringo, the Kavirondo (probably 'the Baringo, Samburu, Naivasha, and Okara), the Baringo, the Kavirondo (probably'something to the north of Shizu, in Ukerewe, res 'th August 1859, Mr. Stanley's capital, Ulagala or Uragara, to four or other to the north-west. The Napoleon Channel remains 'the Luabarri or still-water" Creek becomes the Lusarri or "still-water" Creek and they range between E. long. (G.) 32° and 34°. 1. The limits, roughly spe

---

**MR. STANLEY'S EXPLORATION**

Athenaeum Club, Nov. 27, 1875.

Mr. Stanley's missing letters (April 12 and 14, 1876) enable me to complete the statement which I made in the Geographical Magazine, for November, 1876, and now make a few words of personal explanation. What I have stated during the last fifteen years is simply that "Captain Speke's Victoria Nyassa is a lake which Sir Richard Burton declared to be "a mere collection of lagoons." (Rawlinson; Address to Sixtieth-Session.) My original idea of the Nyassa, derived from Arab information in 1859, was that it was a very narrow water, 220 to 300 miles, formed somewhat after the fashion of the Tanganyika. I proposed to call it the Ukewere Lake, and, greatly to the displeasure of my late companion, I would not allow my map to contain any part of it except the southern extremity, which had been laid down by actual observation.

The Speke and Grant Expedition (1861-1863) set out with a map drawn for its leader by my friend, Mr. Trelawney Saunders. Capt. Speke, standing upon his observatory near Mwinza, took one angle of the shore-line to the north-east and the other to the south-west, but did not do to prolong these sights into infinite space, so that at the last the lines were connected by a third, forming a manner of triangle, with an inverted delta issuing from the base. For no better reason, but to spread the lake over more ground, the Baringo or Babari ya Ngo was dotted into the north-eastern extremity.

I am in possession of this map, which disfigured the lakes of Africa for so many years, whose true history is unknown to press and public, and which is evidently the only one familiar to Mr. Stanley's predecessors. The latest explorer, who calls this map an "imaginary sketch" and still fancies that it was drawn from native reports, has reduced the Nyassa to a point at E. long. 35°, Capt. Speke's being 37°—a little difference of 120 miles. He has, in fact, cut off a third, or, including the Baringo, nearly one-half of the lake, and is in many cases speaking, extend from a little north of the Line to a little south of S. lat. 2° (Kaghebi being in S. lat. 2° 30'), and they range between E. long. (G.) 33° and 34°. In our line the Lusarri becomes the Lusarri or "still-water" Creek and the Mweru rain disappears. No "rush drains" flow northward, and the Lota Neiga is not a "backwater." There remains only that surprising "canal" lying to the west of the true outfall, and this mystery we shall hope presently to see explained. At any rate, we have at last done with the mythical "inverted delta," which postulated a "group of lakes" attached or detached.

Capt. George R.N., has protracted Stanley upon Speke, and the result is highly interesting. We have not yet received the thirty-seven observations made by the former, but with his own statement concerning the superiority of a "sea horizon" upon an equatorial lake at noon, we must prefer to the data in the cases to which they apply. This land and latitudes differ. Indeed, I am pleased to note that, whereas there was before a difference of sixteen miles, this has been reduced, in the case of one-halt mile; and we may safely predict, when the calculations shall be worked out, that the latitudes will agree better than the longitudes. The alluvial of 3,800 feet must also be considered; and it seem to me that the independent observations being only sixty feet.

Having cleared this portion of his journey, Mr. Stanley's northern base of Lake Nyassa some twenty-five miles further south we may, remark how well his eastern line corresponds, in its meridional direction, with that drawn by Mr. Keith Johnston for the Rev. T. Wakefield's remarkable paper, "Routes of Native Caravans," &c., in the Journal of the Royal Geographical Society, Vol. xli, of 1870; and this leads us to consider the middle and western lakes of the eastern area of Capt. Speke's Victoria Nyassa. Dr. Livingstone heard of four waters, namely, the Okara, the Baringo, the Kavirondo (probably'something to the north of Shizu, in Ukerewe, res 'th August 1859, Mr. Stanley's capital, Ulagala or Uragara, to four or other to the north-west. The Napoleon Channel remains 'the Luabarri or still-water" Creek becomes the Lusarri or "still-water" Creek and they range between E. long. (G.) 32° and 34°. 1. The limits, roughly spe

---

**MR. STANLEY'S EXPLORATION**

Athenaeum Club, Nov. 27, 1875.

Mr. Stanley's missing letters (April 12 and 14, 1876) enable me to complete the statement which I made in the Geographical Magazine, for November, 1876, and now make a few words of personal explanation. What I have stated during the last fifteen years is simply that "Captain Speke's Victoria Nyassa is a lake which Sir Richard Burton declared to be "a mere collection of lagoons." (Rawlinson; Address to Sixtieth-Session.) My original idea of the Nyassa, derived from Arab information in 1859, was that it was a very narrow water, 220 to 300 miles, formed somewhat after the fashion of the Tanganyika. I proposed to call it the Ukewere Lake, and, greatly to the displeasure of my late companion, I would not allow my map to contain any part of it except the southern extremity, which had been laid down by actual observation.

The Speke and Grant Expedition (1861-1863) set out with a map drawn for its leader by my friend, Mr. Trelawney Saunders. Capt. Speke, standing upon his observatory near Mwinza, took one angle of the shore-line to the north-east and the other to the south-west, but did not do to prolong these sights into infinite space, so that at the last the lines were connected by a third, forming a manner of triangle, with an inverted delta issuing from the base. For no better reason, but to spread the lake over more ground, the Baringo or Babari ya Ngo was dotted into the north-eastern extremity.

I am in possession of this map, which disfigured the lakes of Africa for so many years, whose true history is unknown to press and public, and which is evidently the only one familiar to Mr. Stanley's predecessors. The latest explorer, who calls this map an "imaginary sketch" and still fancies that it was drawn from native reports, has reduced the Nyassa to a point at E. long. 35°, Capt. Speke's being 37°—a little difference of 120 miles. He has, in fact, cut off a third, or, including the Baringo, nearly one-half of the lake, and is in many cases speaking, extend from a little north of the Line to a little south of S. lat. 2° (Kaghebi being in S. lat. 2° 30'), and they range between E. long. (G.) 33° and 34°. In our line the Lusarri becomes the Lusarri or "still-water" Creek and the Mweru rain disappears. No "rush drains" flow northward, and the Lota Neiga is not a "backwater." There remains only that surprising "canal" lying to the west of the true outfall, and this mystery we shall hope presently to see explained. At any rate, we have at last done with the mythical "inverted delta," which postulated a "group of lakes" attached or detached.

Capt. George R.N., has protracted Stanley upon Speke, and the result is highly interesting. We have not yet received the thirty-seven observations made by the former, but with his own statement concerning the superiority of a "sea horizon" upon an equatorial lake at noon, we must prefer to the data in the cases to which they apply. This land and latitudes differ. Indeed, I am pleased to note that, whereas there was before a difference of sixteen miles, this has been reduced, in the case of one-halt mile; and we may safely predict, when the calculations shall be worked out, that the latitudes will agree better than the longitudes. The alluvial of 3,800 feet must also be considered; and it seem to me that the independent observations being only sixty feet.

Having cleared this portion of his journey, Mr. Stanley's northern base of Lake Nyassa some twenty-five miles further south we may, remark how well his eastern line corresponds, in its meridional direction, with that drawn by Mr. Keith Johnston for the Rev. T. Wakefield's remarkable paper, "Routes of Native Caravans," &c., in the Journal of the Royal Geographical Society, Vol. xli, of 1870; and this leads us to consider the middle and western lakes of the eastern area of Capt. Speke's Victoria Nyassa. Dr. Livingstone heard of four waters, namely, the Okara, the Baringo, the Kavirondo (probably'something to the north of Shizu, in Ukerewe, res 'th August 1859, Mr. Stanley's capital, Ulagala or Uragara, to four or other to the north-west. The Napoleon Channel remains 'the Luabarri or still-water" Creek becomes the Lusarri or "still-water" Creek and they range between E. long. (G.) 32° and 34°. 1. The limits, roughly spe...
THE ATHENÆUM

No. 2509, Nov. 27, 175

THE AYANNA (a., as laid down by himself),

extends south of the Equator.

To the latter, Mr. Stanley has no means of

enjoyed by our labourers have the

time' the best of his co-workers, and dates are

anticipate Egyptian

been

in Abyssinia and

Egyptian

been

16th OE

remarked Bombay that has been published, and is at once

may be

it is, but as it is to be, and more Upernivilr, but the spring was backward;

said

. . . . . ' . . .

A second army corps is

thing

of Abyssinia and other­

by

and

that year. Mr. Vignoles—

stones)

English measure —

became

Stanley

W & S

Mr. the'

t4'e

tre

matter Mr.

be said of many

giJiiig'up the

of the Equator." he has collected a large number of botanical

have been hastened to meet the occasion of the Prince

qfougb'W

he also

and his services were at once put in requi-

miles. He has examined N orth- Western Kordofan,

had put back

profession which was then only (so to A mail from the

the

savages

GROGRA..PHIC.A.L fOTRS.

Mr. Stanley's

He

was enabled to obtain the number

portion

negro whenever he can. It is hardly

who

all

. . . . . Copen-

the'

Woodtfook,

as

the

death at

Hans and his dogs. Every

back;

short delay, they again started,

a

was

age'

reproduced,

have taught the natives to do

B.

his host.

of Uganda, "im­

from the east,

nd

minor treatises, the depots down to Lyttleton Island during the

of Central

prisoner. Thus much for the

to

text-book of proved utility, is intended to keep up the communication with

RICHARD

intact,

n.

report at, Zanzibar is that much of the

ded by leaving the country before the tribe

ng slavers." But

the two personal narratives which have lately

negroes were killed off shore by the repeater,

ore

s' with the revolver

ny generations to come, and this extreme

technical work. In the complete grasp of all

M. D. E. BUSON.

Mr. G. B. VIGNOLES, F.R.S.

briefery recorded in our last number the

of this eminent engineer, but a few facts

him to cultivate many branches of science, es-

preparation had been made for cutting docks in case

reality, he only anticipated by some quarter of a

century important works, deemed then impossible, Bay, but, after

and King Menelek of Shoa is

from Waterford to Limerick, and

technical contest, as it was, in fact, a

We need not follow out more minutely his purely

Commodore Goodenough's excessive softness

RICHARD E. BUSON.

2.

The first of the family who turned

was Jacques de Vignoles, Sieur de

whose immediate descendants took refuge

on the Revocation of the Edict of

Two branches of this family are men-

in the subsequent history of the Huguenot

groups of which one remained in Ireland, and

settled at Southampton. Mr. Vignoles was

in the latter reign, and Capt. Vignoles was

Regiment of Light Infantry—being

in Ireland in 1795, the subject of our notice

Woodlook, in the county of Cork,

of May 1792. Mr. Vignoles,

an infant—seems to have been with

then the 33rd was stationed in the West

Capt. Vignoles was

the adven­

by the Duke of Kent, an

his father's regiment was given to

was then but a few months old; and

had completed his second year. He was of

at the time, at

the time, was perhaps the oldest in the British

brought back to England, and

place of his maternal grandparent,

Rumney, who undoubtedly owed the

personal supervision of so eminent an

instructor. He became a sound mathematician

and an expert calculator, was well versed in all

measures, and may be said to have been the first

modern engineer who was a practised linguist.

He had also extensive acquaintances with standard

memory. When Sir G. B. Airy was a guest of

Mr. and Mrs. Vignoles at Bilboa in Spain, at

the time of the Astronomical Expedition in 1833, a

automatic reproduction of memory and his
could hardly

be called a scientific contest, as it was, in fact, a

memory as who could most readily

and recite some of the most elaborate English

travelling backward from Canning's

The Needy Knife-grinder," which Sir George

reproduced, Mr. Vignoles plunged at once into

the less familiar ballads of the last century, in

however, the astronomer was equally at

home. The result was a "draw." They

Ambro Rosa salutis.

in sacra pace et respondens parent.

Owing to circumstances which have been noticed

in several of our contemporaries, Mr. Vignoles

became a railway engineer. He had proved his

aptitude for this calling by his survey of the

of Florida, the map he compiled on the occasion

being a monument of careful work and draughts-

manship. His energy soon brought him into

important cases. In requisition by the elder Stephenson and the Messrs.

Bennie. His chief original lines were the Midland

in the North Union, the North Western, Ashfield and

Manchester, and the North-Western in England. Mr. Vignoles is also to be credited

with the first Irish railway, from Dublin to Kingst-

town; and he also prepared the plans for the line

from Waterford to Limerick, and projected other

schemes which were afterwards carried out. It

must not be forgotten that the first railway in

Scotland was initiated by his design, and he was

the same may be said of many other foreign

We need not follow out more minutely his purely

technical work. In the complete grasp of all

of a profession which was then only (so to speak) in

process of formation, he must be pro-

nounced equal to the best of his co-workers, and

to the second editions superior to all. He has been called by a competent judge the "purest"

civil engineer of his day, and when his biography

appears,—a pious labour soon, we believe, to be

undertaken by members of his family—these

remains will be for ever a monument of his reality, he only anticipated by some quarter of a

century important works, deemed then impossible, Bay, but, after

and King Menelek of Shoa is

from Waterford to Limerick, and

technical contest, as it was, in fact, a

We need not follow out more minutely his purely

technical work. In the complete grasp of all

of a profession which was then only (so to speak) in

process of formation, he must be pro-

nounced equal to the best of his co-workers, and

to the second editions superior to all. He has been called by a competent judge the "purest"

civil engineer of his day, and when his biography

appears,—a pious labour soon, we believe, to be

undertaken by members of his family—these

remains will be for ever a monument of his

The "ghower highway" to the white traveller

must not be forgotten that the first railway in

Scotland was initiated by his design, and he was

the same may be said of many other foreign

We need not follow out more minutely his purely

technical work. In the complete grasp of all

of a profession which was then only (so to speak) in

process of formation, he must be pro-

nounced equal to the best of his co-workers, and

to the second editions superior to all. He has been called by a competent judge the "purest"

civil engineer of his day, and when his biography

appears,—a pious labour soon, we believe, to be

undertaken by members of his family—these

remains will be for ever a monument of his

The "ghower highway" to the white traveller

must not be forgotten that the first railway in

Scotland was initiated by his design, and he was

the same may be said of many other foreign

We need not follow out more minutely his purely

technical work. In the complete grasp of all

of a profession which was then only (so to speak) in

process of formation, he must be pro-

nounced equal to the best of his co-workers, and

to the second editions superior to all. He has been called by a competent judge the "purest"

civil engineer of his day, and when his biography

appears,—a pious labour soon, we believe, to be

undertaken by members of his family—these

remains will be for ever a monument of his

The "ghower highway" to the white traveller

must not be forgotten that the first railway in

Scotland was initiated by his design, and he was

the same may be said of many other foreign

We need not follow out more minutely his purely

technical work. In the complete grasp of all

of a profession which was then only (so to speak) in

process of formation, he must be pro-

nounced equal to the best of his co-workers, and

to the second editions superior to all. He has been called by a competent judge the "purest"

civil engineer of his day, and when his biography

appears,—a pious labour soon, we believe, to be

undertaken by members of his family—these

remains will be for ever a monument of his