## DESERET EVENING NEWS: SATURDAY, DECEMBER 16, 1899.

Pride

of Japan

(Tree)

Tea



IN BONNIE SCOTLAND

THE GORDON HIGHLANDERS.

Protestants Stirred Up by Higher Criticism-Notes on Various Toples.

special Correspondence.

Edingburgh, Scotland, Nov. 22 .- To a man o'er the sea it certainly looks as though Britain is getting vastly more than she bargained for in her present set-to with the Boers. No matter how encouraging to the British the ultimate outlook may seem at present, the fact remains that even now the English have lost far more lives than they at first unticipated, and are in a fair way yet to suffer defeat at many points of the South Africa compass, for some time to come. The strict censorship over news from the seat of war has made accurate tidings very difficult to secure, but at best reports are not so encoursging as many would like to see them. The British forte, however, is to stay aggressive action until such time as all the troops are landed, then it is anticipated that orders will be given to push things to a climax and drive the Boers from their positions.

Two weeks ago the last detachment of Gordon Highlanders took their departure for the front. This regiment ad occupied the Edinburgh Castle for of months, and it was with a period whispered regret on both sides that they obeyed orders to embark for the Cape. The boys left for Glasgow at midnight, but several hours before, marched from the castle to the station, down through the principal thoroughfares, to that touching Scottish selection on such oc. casions, "Will Ye No Come Back Again," The keltle lads promised that they would, and affectionately kissed and caressed their best lassies till the train pulled out with its cargo of preci-cus freight. This branch of the Gorous freight. dons will doubtless be heard from soon atter their arrival. Anent the Duke of Connaught's al-

leged tender of his services in the present war with South Africa, the British papers have had considerable to say of The concensus of opinion is that his was a magnanimous and truly patriele act, but the authorities, say they, cted wisely when they deemed his go-ing to the front inexpedient. If he had en allowed to go, and mistakes had happened under his leadership, then, the inquirent is, the actions of a faulty reyal commander would reflect gravely is the throne. Then again, the Boer war is no child's play, and the best of generals is apt to be outwitted; hence he wisdom of sending out General

in this city at which the Higher Crittion in machinery weight and in coal icism was burned in effigy, so to speak, at the hands of clergymen whose consumption per horse-power are especial importance in such vessels, and Scottish Covenanter traits still ignite, the absence of vibration is also a great within them. "What is Protestantism coming to?" is the cry now being heralded throughout the British kingadvantage. A vessel of 1,000 tons, with spacious accommodations for 600 passengers and with machinery developing 18,000 horse-power, would have a speed Things theatrical are quite lively here of about 30 knots, as compared with

at present, the playhouses being well supplied with fairly good bookings. This the 19 to 22 knots, as the present vessels of like size and accommodation. A week the Tyranny of Tears is playing special unarmored cruiser, with scanty to big business at the Theater Royal. The play deals with the distresses of a crew accommodations, but an arma ment of guns and torpedoes, would have interesting speed possibilities. With dimensions double those of the married man, whose wife goes through the world harping almost insessantly on a minor key, and so successfully does it hold the mirror up to nature, that 30-knot destroyers, and plates of double thickness, specially strengthened, there would be two tiers of water-tube boilwomen witnessing the drama, are said to absolutely refuse to perceive the ers, and eight propellers of nine feet likeness to themselves. In other words diameter, revolving at about 400 revot endows them for a time with that lutions per minute, and the speed would 'giftie'' written of by Burns, the use of be nearly 44 knots. For this speed the coal supply would last eight hours but for 10 to 14 knots the economy would which, however, they fail to take advantage of when opportunity is so richly afforded. The Private Secretary, an exceed ordinary vessels. old favorite with Salt Lakers, is being well received at the Lyceum. Madame Patti, the noted diva, ap-

The manufacture of mineral waters is criticized by a French chemist, P. Carles, who finds that very often too little care is exercised. The great essentials are the judicious choice of a soft water, the use of perfectly pure carbonic acid, and the exclusion of valves made partially of lead. In times of epidemics special attention should be given to the bacteriological purity of water, and it should be remembered that microbes-as those of typhoidlive longer in seltzer water than in ordinary water.

20th, the Utahans having come up from Gas engines driven by blast furnace London, where Mr. Cannon had busiwaste have now been installed in Engness, to see the sights of the Scottish land, Scotland, France and Germany capital. Both were delighted with their short stay, and while here, took occa-A recent estimate shows that a furnace sion to have a peep at the great Forth producing 600 tons of pig iron per week, Bridge. On Sunday evening Mr. and using a ton of coke per ton of iron, would deliver 600,000 cubic feet of gases Mrs. Cannon addressed the meeting of per hour, of which a third would be Latter-day Saints, the former dealing with historical evidences of the divinity for the blast. The remainder would give 3,500 to 4,000 horse-power in of the Book of Mormon, and the latter speaking upon the women of Utah. their gas engines.

the electric motor may be made

propel the carriage, or both may be

intended for use chiefly on city streets, where the odor of the exhausted oil

vapor might be annoying. On level country roads the engine is to supply

the power, but will have the aid of the

The double source of energy offers an

important advantage, of course, in the

reserve of means to finish one's jour-

The terrific explosion that occurred

some months ago in a chlorate of pot-

ash factory at St. Helens, Eng., has

been a subject of careful investigation. No previous explosion of chlorate of

potash could be found on record, but

experiment proves that the salt is lia-ble to explode when the temperature is

the only probable cause suggested for

From barometric observations at

Rome, F. Morano concludes that the

moon produces two high and two low

atmospheric tides each day. Assuming the earth's atmosphere to be 300 kilo-

meters (186.51 miles) deep, he calculates

that the moon causes a tide of 21 meters and the sun one of 10 meters,

ney in case one motor fails.

the St. Helens disaster.

trie motor in climbing long hills.

environments and privileges. The ex-senator and wife expect to be home about Christmas. ALEX. BUCHANAN JR.

peared here in concert a few nights ago.

rendering Caro Nome, The Nightin-gale's Thrill, Quand tu Chantes, Batti

Batti, Pur Dicesti and Home Sweet

voice at its best, and her appearance

was the signal for great enthusiasm.

Critics here say there is scarcely any

sinsible diminution of her wonderful

Ex-Senator Frank J. Cannon and

wife visited Edinburgh on the 19th and

These displayed the singer's

Home.

powers.

## SCIENTIFIC MISCELLANY.

A few of the engineering fields from which much may be expected in the twentieth century were pointed out by Sir Douglas Fox in a recent address to British civil englneers. The problems of surpassing importance now opening up include: Trunk railways through Rus. sia, China, Persia, Africa; irrigation works to supply the wants of growing populations; harbors large enough for the vessels of the future; central installations to furnish lighting, power, traction and heating to whole countles; the extension of telephonic communication-with and without wires; the abolition of the smoke and smell of cities. the replacement of horses by mechani-

cal power in the streets; the increase of the speed of trains to 100 miles per hour; the erection of tall buildings where land is valuable; the utilization of waste products, especially the refuse of cities; the improvement of the water supply the reclamation of land; the profitable working of deep seams of coal.

The most destructive insects are the locusts and the white ants or termites, Reporting the work of these in India. Mr. E. P. Stebbing states that the locusts invade the fertile districts from their home in the sandy deserts, and in their course leave not a green leaf or shoot in forest or field. Forests and The appearance of the first volume of moisture being their greatest enemies, the maximum tide being 31 meters. Encyclopaedia Biblica, otherwise known as the Higher Criticism of the Bible, plantations would tend to check this

prepared Packego Tea that comes to Amer-160 and rays of the wood-is produced in about half a minute when a metallic point negatively charged by an influ-ence machine is brought within about two inches of the paper. It is ex-plained that the paper becomes nega-tively charged, and a photographically active glow light is produced between it and the wood. It is proposed to try this method for copying drawings and other purposes. The Arctic ocean, says Nansen, is a kind of lagoon separated from the At-The automobile of Edouard Henrilantic by a submarine ridge, stretching quez of Brussels, Belgium, has an ingenious power combination. It is pro-

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from Spitzbergen to Greenland. To this ridge is due a curious condition. vided with both gasoline engine and an The Arctic is covered with a layer of electric motor with storage battery; and by suitable gearing, clutches and slightly salt water from the Siberian rivers and Bering Strait, and under switches, either the gasoline engine or this is the normally salt Gulf Stream water. If the two layers were mixed, the avereage temperature would fall. used, or the engine may be made to but this average would not be as cold drive the motor for charging the storas the surface layer. This accounts for the enormous formation of polar ice. age battery. The electric equipment is

structure so familiar in our paper and cotton, has long had its great usefulness extended by impregnation, with gypsum, resin and other substances, or covering with impervious varnishes. More recent products into which it is transformed by chemical destruction of the cell itself are listed by S. Ferneezi: 1. Several kinds of parchment paper are produced, resembling true parchment from animal skins, by plunging unsized paper into strong sulphuric acid, then freeing from excess of acid by washing and neutralization. 2. Sulphitic cellulose, prepared by 2. Sulphitic cellulose, prepared by treatment with acid sulphite of calcium or magnesium, became thirty years ago the most imraised very rapidly, and sudden heat is portant substance in paper manufacture. When saturated for a long time in a pulping machine, it yields material for a cheap parchment paper, which, in thin, transparent sheets, is known as "pergamyn," and is used for packing perishable articles. 3. By long trituration of sulphitic cellulose, destroying completely the textile fibers, and spon. taneous evaporation of the pulp, blocks of amorphous cellulose are obtained. This material called "cellulith," when freed from air by boiling or steaming, can be worked like horn or ebonke, re-



has created no small sensation among church goers in this country. The views herein expressed concerning things criptural, have caused Bible readers wonder what religion is coming to, ind have brought forth also some very quarte comments from the press. For instance, here is a sample editorial from a leading paper published in this city:

"In dealing yesterday with the article d Mr. Taylor Innes in the "Speaker," te temarked that, from the standpoint of Protestantism, "Christianity is the cumination and fulfilment in Jesus Christ of a series of revelations from God to man.' It might be interesting to discover the attitude of the Higher Criticism towards these revelations as shown in the new 'Encyclopædia Bibli-m' conducted by Christian soom in the new 'Encyclopædia Bibli-ca,' conducted by Christian professors and dergymen. According to the old ofthodox views, the Bible gives a cor-het account of God's dealings with, and communications to, Adam, Noah, Abra-ham, Moses, etc. Let us begin with Adam, Eve, and the Garden of Eden. According to the 'Encyclopædia Bibli-G' Adam and Eve never existed. The a.' Adam and Eve never existed. The sory of the Garden of Eden is not his-trical. The conclusion is obvious-God made no communication, did not reveal Himself, as the early chapters of Gen-

ess would have us believe. What of God's relations with Noah? What of the Deluge? There was no deluge. The Encyclopædia Biblica' tells us that the Biblical account 'had its origin in Babylonia, and is fundamentally a myth of winter and the sun-god.' In myth of winter and the sun-god." other words, "the Hebrew story must have been borrowed from the Baby-inian." Thus, as regards the Garden of Initian.' Thus, as regards the Garden of Elen and the Flood, church professors have now endorsed the views of Tom Fune and Charles Bradlaugh. What # Abraham? Did God reveal Himself to Abraham? Paul believed that God's revelations to Abraham were of mo-mentous significance not only to Jews but to Gentiles Paul was divertible. but to Gentiles. Paul was altogether trong. We are now told that no such person as Abraham ever existed, Sarah ad Lot also disappear into the unhown, from which they would never have emerged had not the writers of Genesis been gifted with exuberant maginations. So far, if we may trust the Higher Critics, Genesis contains no subentic accounts of a revelation from God to man. But surely we are on firm distorical ground when we come to the times of Moses. We all remember the dramatic story of Mount Sinai and the bralogue, referred to impressively in the Epistle of the Hebrews. The writ-er of that epistle, like Paul, was a poor, Thorant creature. We are now in-formed by one of the writers in the Biblica,' the Rev. W. E. Addis, that the Decalogue must be put long after the time of Moses.' No revelation from beyon beyon the barry of the put long Mass. What of David, the man after Gd's own heart? Professor Cheyne, in saling with David, remarks that 'keen endicism is necessary to arrive at the length of fact, which undoubtedly is in the legends that have come down to us." the story of David's encounter with Goltath. Bul, surely, David was the seet singer of Israel, the author of many, if not most, of the Psalms. Here, to, we must prepare for a shock. Pro-tempor Cheyne says we cannot ascribe with any probability any of the psalms With any probability any of the psalms in the Psalter to David. What of the book of Daniel, with its marvelous pre-dictions? We are told that it is un-bistorical. All that about dreams, bistorical. All that about dreams, visions, and the lions' den belong to the term of imagination. Daniel cuts a sary figure at the hands of the Higher Cities. What is the inference to be drawn from these results of the Higher Citiedans? So far there are no signs of a revolution from thed to man-nothof imagination. Daniel cuts a a revelation from God to man-noth-he but simply the natural evolution of and a great deal of legendary matter. It, Taylor Innes seems to think that the new views of Christianity and the matter that the provided of the provided o natural religious aspirations the new views of Christianity and the hube make it easier for the devout working man to accept the Christian re-king man to accept the Christian re-king man to accept the Christian re-hubers. It is difficult to see what consolation the devout working man can get from the fact that leading cler-types and professors are rapidly reachand professors are rapidly reach.

The white ants work disaster to any building, yet render service to man by rapidly converting decaying wood into mud, doing no damage to healthy trees, So marvelous is their instinct that they discover and attack a dead branch

on any part of a tree's trunk. Certain of the rarer elements, as ap-pears from a paper by J. H. L. Vogt on the distribution of vanadium, constitute about the following percentages of the

earth's solid crust: Phosphorus, 0.09 per cent; manganese, 0.075; sulphur, 0.06; titanium, 0.03; barium, 0.03; zirconlum, 0.01 to 0.02; chromlum, 0.01; lithium, 0.005; strontium, 0.005; nickel, 0.005; vanadium, 0.0025 to 0.005; cerium, less than 0.001; yttrium, ess than 0.001; cobalt, 0.0005; thorium, 0.0001. Zinc and glucinum are somewhat less rare than vanadium.

The steam turbine is the oldest heat engine on record, the engine described by Hero of Alexander about 200 years before Christ having been a crude form of steam turbine. Its successful appli-cation to the Turbine, which is esti-mated to have reached a speed of 341/2 knots and to torpedo boat destroyers, has led the Hon. C. H. Parsons to con-sider the fitness for larger vessels of the principle that has lain so long dormant. He finds the conditions for its use even more favorable on the faster class of vessels, such as cross-channel boats, liners and cruisers. The reduc-A impression-showing clearly the rings

The elephant beetle of Venezuela, sometimes weighing half a pound, is believed to be the largest known insect.

preparation of mixtures rich in oxygen;

in the manufacture of ozone; in the testing of meteorological instruments;

In photographing wood sections with-out a lens, Herr Fomm places a piece of tinfoil on one side of the section and the film surface of a sheet of bromide

and scientific research generally.

fats and oils, and is fairly elastic. 4. Solution of chloride of zinc and ammoniacal oxide of copper, like sulphuric acid, transform cellulose into an amor-The artificial production of cold has reached its greatest development in phous mass. When, after treatment, this mass is exposed to wind and rain for Munich, where refrigeration by the passage of gasses from high to low pres-sure was begun in 1881, and has since some weeks, it is completly changed into hydrocellulose, and is known as "vulcanized fiber." It is made in two varieties, the flexible and the hard. It found so many applications that the industry has become second only to that of brewing. In the cold air storage building, the most complete yet erecthas been made in sheets in the United States since 1878, and is now formed in-to tubes, rods, cogwheels, etc., and used to replace rubber and leather. 5. Treated, the temperature of the cells is kept at 3 degreees C. (37.4 degrees F.), the air containing 60 to 70 per cent of ment of cellulose with sulphuric and nitric acids yields nitrocellulose. This molsture. These are the chief indus-trial and scientific uses of the low tem-peratures: Manufacture of ice in the is the starting point of the high explois the starting point of the high explo-sives, and with camphor is changed into celluloid, which has very varied applications. 6. English makers are turning out an imitation leather, called "pegamoid." This is a mixture of cot-ton and paper covered with a secret commention supposed to be cellulated brewing industry; preservation of meat and other food; preservation of anatomical specimens: in the morgues; arrestation of the development of the silk cocoon; arrestation of the growth of bulbs (making them independent of composition, supposed to be celluloid. their customary flowering season); in the preparation of explosives; in the

> Leakage from steam pipes is believed to have been greatly underestimated, tests by Mr. R. S. Hale having indi-cated the following proportions of loss: In mills 5 to 16 per cent; electric plants, 2½ per cent; steamships, 1½ to 10 per cent; waterworks, 2½ per cent.

paper against the other side. A good Detonations heard at about the time the Umbria-Marches earthquake of Dec. 18, 1897, have been made a sub-ject of study by Prof. A. Issel, an Ital-ian seismologist. These detonations were quite distinct from the ordinary earthquake sound, and were more or less prolonged crashes, resembling the boom of thunder or the report of heavy guns in the distance. Sometimes they were isolated, at other times following one another at brief intervals. To many persone the crashes seemed to come from Monte Nerone, where the epicentre of the earthquake was situated. Similar sounds are frequently heard by inhabitants of the middle Appennine region to whom they are known by the name of "Bombio," and, as they are very often closely connected with earthquakes, it is concluded that they are mostly due to causes within the earth. These mysterious boomings are of the kind known in other places as "Barisal Guns," "Mist-Poeffers," etc.

> Interesting and beautiful effects of the well-known etching of glass by fluoric acid have been reported by Mr. C. E. Benham, of Colchester, England, Various saits are crystallized in a thin layer on class which is well. layer on glass, which is well warmed to prevent the crystals from dissolving, and the glass is then exposed to the vapor for three to five minutes. The microscopic forms of the crystals are accurately reproduced on the glass.

The power station at Point-l'Abbe Finisterre, France, utilizes the tide for fourteen hours a day, the total fall being seven feet and a half, generating eighty horse-nower. The water at flood tide flows through a canal two miles and a half long to a pond, return. ing to the sea at ebb tide.

Coldness of the feet from tea-drinking, an effect sometimes observed, is explained by Prof. Hutchinson, F. R. S., as probably due to contraction of the arteries. In one lady tea-drinker, the feet were not only cold, but were wet with perspiration.

The calamander tree of Ceylon, allied o the ebony family, and represented by only 90 specimens, is credited with the very rarest wood. The tree is carefully protected.

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the views of Tom Pain and Charles As a further evidence of the rumpus As a further evidence of the rumpus bis learned diagnosis of the Bible has brought forth, it is but necessary to see that last Sunday evening a num-ber of indignation meetings were held. Mr. Chin Fom Ye, the envoy extra ordinary and minister plenipotentiary of Korea, is seen these days listening with apparent interest to the proceedings in Senate Chamber. Our Washington photographer secured permission, after much trouble, to photograph him in h is state dress. Here is the first picture ever printed of this interessing Orien tal.

