To the Editor of the Scientific American: BIB,-In your issue of the 7th inst. noticed an article on the above subject by Henry Pemberton, jun., as also some editorial remarks by yourself. With respect to Mr. Pemberton's remarks, I would state that it is evident he formed his opinion on entirely a theoretical basis. His opinion is one which would very probably be expressed by any number of persons who rely on theories instead of on facts. Mr. Pemberton states that when an alum baking powder is used in baking, the alumina of the alum is precipitated and becomes insoluble by heating. A very distinguished scientific man writes to me, and says : "This is a matter of experiment, and facts thus obtained are undoubtedly worth far more than conclusions derived theoretical considerations." This last paragraph has embodied in it my views on this subject, and it strikes me it would have been proper for Mr. Pemberton to have made a few experiments with bread or biscuits made with an alum powder, to see if the alumina was really in an insoluble or in a soluble condition, before expressing so decided an opinion. I am perfeetly well aware that when an alum baking powder is used in baking, the alum is transformed into another alumina salt, provided the constituents of the powder are combined in exact chemical equivalents. If, however, the constituents are not in exact equivalent proportion (which is more probable than otherwise, as chemica weights are seldom, if eyer, adopted by manufacturers), there will be certain per cent. of alum unaltered. There would, therefore, be product present in the baked either case an alumina salt; and in the last, or more probabl, case, in addition to the alumina salt, some unaltered alum. So that, supposing a portion of the alum was transformed into an insoluble alumina salt (which has not been proved as yet in the baked produst), it is evident persons eating the baked product would run the risk of taking into experience made me give it up from choice their stomachs the unaltered alum. It is on other nights. So, for the present at true the per cent. of this would probably be least, I am reformed." small, but by its continued use would certainly bring about serious disorders in the enced in Skye for many years fell a few system, As regards the alumina salt, let us Sundays ago. The fall was very heavy after stop a minute. Wagner states: "The nightfall, and the ground in some places was active principle of alum is evidently the for a time covered to a depth of about eight sulphate of alumins, not the sulphate of inches. It is seldom snow falls to such an potassa and ammonia." That alumina is extent in Skye, or, indeed, that the extensive the poisonous element of alum, I think the sheep farmers of the Island have any cause following provings clearly demonstrate which of concern for their sheep from the danger of I take from my Encyclopædia of Materia snow drifts, as their brethren have in the uply-Medica: "It destroys the appetite, ing districts of the mainland. This year, produces sour rectum is rendered inactive, constipa- severe winter-particularly one of frost and tion or loose bloody discharges are produced." snow storms-is invariably the precursor From these provings it will be seen that the of an excellent summer and an abundant effects of alumina on the system are substan- harvest. tially the same as alum. That is to say, that alumina bears the same relation to alum (being its active principle) as morphine does patent dynamo electric light apparatus. At to opium or nicotine does to tobacco. Supposing, again, that the alumina salt formed in baking was in an insoluble condition (which I have already stated has not been demonstrated), and not considering the amount of alum left unaltered, I doubt if the public would be willing to run the risk of eating the baked product, for fear that the heat of the oven was not in the proper condi- finery, is placed 150 feet from where the tion to render it all insoluble. Supposing, on high scientific authority, I should state their position by machinery in a small glass of the citizens to pack up and leave for that a salt of antimony (take for example case. The experiments with the apparatus neighboring towns. The churches and tartar emetic) if added to a cup were of the most satisfactory kind. The schools are all closed, and many of the stores of tea would be completely neutralized by the tannin or rendered "insoluble" for instance. How many persons would I and the smallest objects could be distin- not been issued for sometime past, and there find willing to drink the tea? Not many, I am quite positive; and this is the view I think the public will take about alum baking powders. When they can obtain a number of powders on the market composed of wholesome constituents, I think they will not care to run the risk with alum powders. As to the alumina salt being in an insoluble condition, I shall, in a future article, have something more to say, to satisfy the scientific men; but I think the public will have

most dangerous to use. HENRY A. Morr, jun . Ph. D., E. M. New York, Nov. 28, 1878.

received, after carefully reading the above,

sufficient satisfaction or explanation to con-

BROWN, THE WHISTLER,

His Private Opinion of England and Englishmen.

Alexander Brown, colored, known as a wonderful lip-whistler has been a prisoner in the Jefferson Market Police Court, New York, under a 10 day's sentence for disorderly conduct. His history is a remarkable and romantic one. He is considered by many to be the best whistler of his kind living. His ability to imitate the rongs of birds, the noises of fowls, the grunting of pigs, the music of stringed and wind instruments, the screeching of wheelbarrows, noises of railway cars, and even steam boat whistles, is marvellous. "Brown, the Whistler," was one of Jarret & Palmer's first troups of colored jubilee folks which went abroad to play "Uncle Tom's Cabin." One of his principal parts in the play was to imitate the whistles of river steamboats, and few foreigners ever learned that the noise was made by a colored man's lips and not by a genuine steam-pipe. Brown says he contracted to go for \$30 a month and find himself. He soon discovered when on the other side that he had made a sorry bargain. He says the English fleece Americans at every point. They charged him an English shilling for every shirt he got washed, a shilling "for looking crosswise," and two shillings for every ordinary and very villainous lunches. In such an expensive country this meagre salary wouldn't support him and he couldn't get it raised. Besides, he couldn't stand the London fogs. He often bruised his head bumping it against posts and things during the damp days in London, and was frequently astonished that he didn't knock his brains out in the fog. So he and fifteen other members of the troupe returned home. He says he was arrested because he whipped some bad boys in the street " for splitting a brick on his head." He is put at white-washing in the prison and is welcomed there by the other inmates on account of the liberal whistling performances he gives them.

H. R. H. Princess Louise very sensibly favors the giving of special attention to the subject of domestic economy as a part of a young lady's education.

A large trade in oysters is being done at sunlight, or to the light of a few inches of

Winnipeg.

Beottish News.

The U. P. Presbytery of Edinturgh has adopted a resolution condemning the Government for waging war against the Ameer of Afghanistan, on the ground that it was " un-

called for and iniquitous." The mail steamer which arrived at Leith recently from Iceland, brings intelligence of the loss of five vessels on the coast of Iceland in the end of October during terrific weather. Three violent shocks of earthquake were felt in Iceland in October.

A letter has been received from the Dumfries Town Council from the Queen's Remembrancer to the effect that the Lords of the Treasury, in reference to the Hannafield gift, had now settled that the whole personal property, which will afford a fund of £10,000, shall be applied to the improvement of education in Dumfries and Galloway.

Two fishermen while out fishing recently off Portincross caught in their nets a large bottle-nosed shark. With some difficulty without food or fire. During the night or they managed to get the monster beached, but not before he had damaged their nets to the extent of several pounds. The rare capture at once became the object of attraction, and was shortly after purchased by a six or seven miles of where he campad the local fishdealer from Saltcoats, who had it first night. Unable to proceed, being exon exhibition at Darly. This is stated to be hausted and badly frozen, he remained in the the only specimen which has been caught on same place until Tuesday noon, when he was this part of the coast, although sharks have found by a settler. Brown was brought to of late been seen in the neighborhood. The fish measures seven and a half feet long, and | alms house, where he is receiving medical atweighs over four cwt.

Campbell, at Kirkcaldy, who is at present badly frozen, are black and will probably be in America, in which he states "that Sunday amputated. The weather was unusually closing in America is universal and no party | mild for the season, or he would not have raises and cries against it. It is carried out | been found alive. for all classes equally. There is no traveller, bona fide or others, allowed exemption. used to like a little whiskey and water at night to settle anything down and make me sleep, but in America I found that on Sunday I simply could not get it. I sleep, however, quite as well without it, so much so that this

One of the heaviest snow storms experieructations, heartburn, however, the summer was exceptionally fine, in the abdominal ring, the and the old people cherish the belief that a

Recently experiments were made in a sugar refinery at Greenock with one of Siemens' present extensive alterations are being made on the refinery, and the electric light apparacreating the electricity, which works at the rate of 1,000 revolutions per minute, and is Post. driven off the ordinary shafting of the reguished.

SPORTING.

THE DETROIT DOG SHOW.

The Detroit Free Press of Wednesday, speaking of the International Bench Show, which commences in that city on Tuesday next, thus alludes to the Canadian entries:-Mr. Arnold Burgess, owner of the Rob Roy Kennel, has entered his famous stock of imported English setters, including the two cracks, Rob Roy and Druid, both vince them that alum baking powders are field trial winners, also his Queen Mab and Nilsson, who have won several first prizes. Nilsson is newly imported, has not been shown in this country. Burgess paid a very high price for her. The dogs which are entered by Mr. Burgess are valued at \$20,000. The great Canadian Kennel, owned by L. H. Smith, of Strathroy, enters the very choicest of the Kennel, including Leicester, Paris (the great Centennial winner), Clip, Temple Bar, Lass o Gowine, and several others. Mr. Smith is well known as the pioneer of imported "blue bloods," or, as they are now called, "Llewellyn setters." No doubt he will send his best here, as Detroit was the first to give his setters the eplendid reputation they have since sustained on many hard-fought fields. The Big Point Kennel Club, of Chatham, enter their famous Mike and Bridget, both pure bred Irish water spaniels. They have taken first prizes in this country since their arrival, and they had obtained numerous prizes in England before being shipped. Wm. B. Wells, jun., of Chatham, sends a fine string of English setters, including his celebrated Star, who obtained first prize at the London show. Mr. Duncan C. Plumb, of Toronto, sends two entries of very fine blood. Major Milligan, of London, enters a very fine Newfoundland. The performing trick dogs will be an especial feature of the show. The contest for the prizes takes place every afternoon and evening. The committee now feel assured in saying that this will be a finer collection of dogs than was ever before brought together. A telegram has just now been received claiming entries of fox terriers, Scotch deerhounds, etc., all from London.

Phosphorescent Dials for Clocks and Watches.

a chemist of Neufchatel, explains the four to five. method of preparing phosphorescent dials for watches and clocks, so that the hour can be ascertained at night. The dials are usually made of paper or thin card-board, enamelled like visiting cards. They are covered with an adhesive varnish, or with white wax mixed with turpentine, upon strontium and calcium possess, like the sulphide of barium, the property of retaining their phosphorescence, but not so long. After the dial has remained in darkness for several days it loses its phosphorescence, but this is easily restored by exposing it for an hour to magnesium wire.

LOST IN THE WOODS.

Six Days' Solitary Wandering? Without Food or Fire-Painful Experience of a New Branswicker.

NEWCASTLE, N. B., Jan. 8.-A man named George Brown, a machinist, came here from Fredericton last week in search of employ ment. Leaving here on Wednesday last he started for Bathurst through the woods by route taken by fishing parties in the summer, and with which he was seemingly not familiar. The first day he followed the highway as far as Anthony Cain's, twelve miles in rear of Newcastle, where he lodged all night. On Thursday morning after breakfast he left Cain's, and after following the highway for two or three miles struck into the woods along a track leading to some clearances. Early in the evening he reached Mitchell's meadows, about twelve miles from Cain's, where the by-track terminates. Here he camp ed for the night in a summer or bush camp early next day heavy snow fell, and Brown tried to regain the highway, but failed. On Sunday evening he came to a halt two or three mlles from the highway, and within town and promptly transferred to the county tendance. His hands are swollen, and the A letter has been received from Sir G. | toes of one of the feet, both of which are

A BREACH OF PROMISE SUIT

Young and Beautiful Lady Deserted by a Faitbless Lover.

Some seven months ago a young and beautiful lady, by name, Miss Cecille Greenbank, arrived in this town from New York. She was the daughter of a Protestant German boy's life, were the work of an instant. The married and become a widow, was advised to visit a relative who resided in the Swiss colony settled in Pennsylvania, U.S. Upon this advice she accordingly acted and was well received by her maiden aunt, who took to all her acquaintances by her pleasing and acquainted with one James Holland a native of Montreal, and he induced her under false promises, to visit Montreal Here, while pending the fulfilment of a promise of marriage, she was engaged as a milliner in a first-class establishment on Notre Dame street. After several ineffectual attempts to prevail upon Holland to fulfil his bargain, and thinking all he had promised wes deceit, Miss Greenbank entered an action against him for breech of promise, which case was to come off in the Superior Court next session. Holland, fearing the consequences, fled to Cincinnati, from which place word was received by telegraph this morning that tus has been procured for the purpose of he had committed suicide in a bar-room by a enabling the alterations to be proceeded with pistol bullet, while under the temporary inby night as well as by day. The machine for fluence of alcohol. Thus ends Miss Greenbank's breach of promise suit .- Montreal

The out preak of small-pox in the village carbons are burning, and which are kept in of Embro, Oxford county, has caused some place where the alterations on the refin-ry are also shut up and the clerks discharged. are going on was lighted up most brilliantly, So far as we can learn the village paper has appears to be a general secession of business. The correspondent of a contemporary says the doctor is to blame for bringing the disease to the village. A nephew of his was the first to take it, and after his death the doctor burned infected bedding, etc., in daylight in his garden. The disease has since spread rapidly, with the result above mentioned .-Clinton New Era, Jan. 2.

RAPID POST-HOLERY.—A new method of planting telegraph poles has been introduced in Pennsylvania. The ground is staked off at distances of 200 feet apart, a man starts off with cartridges of "electric powder," and with | mentioning his name) gave the usual amount a crow bar in his hand. The bar is driven of the gas, but it had the most remarkfour or five feet into the ground, a cartridge able effect. They told me afterwards that with a lighted fuse is dropped into the hole, I lay for fifteen minutes as though I were and the man proceeds to the next stake, but | dead. before he reaches it the cartridge has explod- time, could see, and hear, and feel ed, making a cavity as big as a flour barrel in the ground, and a gang of men who follow | breathing and that my heart did not beat. plant a telegraph pole in the spot. In this way four men will set up 100 to 150 poles per dey, and at a cost two-thirds less than by the old way.

His Reason.—A negro minister, who married rather sooner after the death of his first wife some of the sisters thought proper and becoming, excused himself as follows: "My evening, or how I looked, for that matter. dear bredren and sisters my grief was greater | remember saying a few lines of my part and than I could bear, I turned every way for peace and comfort, but none came. searched de Scriptures from Genisee to Rebelation and found plenty of promises to de widder, but nary a one to the widderer. So took it dat de Lord didn't waste sympathy on a man when it was in his power to comfort himself; and habin a fuss rate chance to marry in the Lord, I did so and would do so again. Besides, Bredern, I consider dat poor Betsy was juss as dead as she would

Prof. C. F. Thwing has collected very valuable statistics of the religious life in American colleges. The majority of professors in nearly all American colleges are communicants of Christian churches. As to the students, nearly half of the total num ber in the United States-2,000-are reported as decided Christians. The proportion of Christian students to the whole number is, in Harvard, one to five; Dartmouth and Bowdoin, one to three; Yale, two to five in Michigan University and Western Reserve, one to two; in Princeton, Brown, Marietta and Ripon, three to every five; at Amherst, In a French journal, M. Olivier Mathey, Williams, Wesleyan University and Berea,

LOST AND FOUND -A curious case of restitution is mentioned in Belgium journals. In August last a box containing 18,000 francs worth of securities was stolen from a farm house at Ronquieres, in the Commune of Hainault. A short time ago the box was found to have been deposited during the which is dusted, with a fine sieve, powdered | night in the garden belonging to the cure of sulphide of barium. The sulphides of Henripont, who at once handed it over to the

police. It still contained 16,000 francs. Mr. Spurgeon is credited with this design ing young couples I generally tell the young lady to let her husband be the head, for that is according to Scripture and to nature ; but him round which way she liker."

Killed by a Bear.

HORRIBLE DEATH OF A BOY AT PARKVILLE, LONG ISLAND.

A great many visitors were drawn to one of the minor hotels on Coney Island during the past two summers by the anties of two trained bears chained to stakes in front of the house alluded to. One peculiarity of the bears, and one which provoked much mirth and proved most profitable to the proprietor of the hotel, was their inordinate capacity for beer. The male bear, an animal of unusual size and beauty, for a bear, who was known as Big Ben, has frequently drank as many as fifty bottles of lager beer day. He used to stand on his hind feet, and holding the bottle with his fore paws, swallow its contents. Like many animals of a higher order, Big Ben never knew when to stop, and would often become very drunk. While in this condition he was frequently kicked and cuffed about by the men who had given him the beer. In the winter time the bears were taken to Parkville and chained in a yard opposite Thom's Road House. On Monday afternoon a party of boys commenced snow-balling the bears, and were driven away by Mr. Thom. About an hour afterward a lad named Samuel Stretch, thirteen years of age, who had frequently played with the bears, approached the larger of the animals for the purpose of petting him. When young Stretch came sufficiently near, Big Ben suddenly sprang on him. Rendered furious by the snow-balling which he had received sometime before, the animal clasped the boy with his fore paws, and hugging him tightly crushed in his ribs. At the same time the bear sank his teeth into the boy's neck, severing the jugular vein, and inflicting a wound which proved almost instantly fatal When young Stretch first found himsel,

being drawn into the fatal embrace of the bear he cried out in terror. A stable man working near by heard the cry, and armed with a pitchfork, rushed to the lad's assistance, but the hug and bite which ended the pastor in Neufchatel, Switzerland, and having tragedy occurred in full sight of the neighboring hotels, and in a moment a crowd of men came running toward the bear. The brute growled furiously and showed a disposition to fight. Mr. Thom, armed with a hatchet, struck the brute on the head, and a great fancy to her. She endeared herself Mr. Peter Ravenhall plunged a dirk-knife into Big Ben's body several times. When winning ways. While there she became young Stretch was carried to Thom's Hotel he was quite dead. Nothwithstanding the stabs from the dirk knife and the blows from the hatchet, it took five shots from a revolver and two shots from a shot-gun to kill the bear. The female bear, which was chained some distance away, exhibited no excitement during the attack on the boy or the subsequent killing of her mate. The deceased boy resided in the Village of Parkville, about two miles south of Prospect Park.

Manud Granger's Experience.

Miss Maud Granger, the actress, who came near dying from the effects of a dose of laughing gas, on Monday last, was found yesterday in a daintily furnished apartment-

and the doctor told me I must have it out, so admonished the intruder. I went. Dr. -- (you must excuse my not I lost all sensation for nothing. They told me that I stopped When I recovered, I lay as if in a dream more than two hours, while five doctors did everything they could for me. I could see he has sent a short preliminary note to the them working around me and hear every word they uttered, but I could have no more a paper to be read shortly before the Royal moved hand or foot than if I were dead. don't know how I dressed for my part that of a powerful voltaic current, Mr. Lockyer coming on and off the stage, and that is all. I was so weak that they had to carry me into found within the tube in hydrochloric the green-room after the last act, but the soid, and then showed, by means audience were very kind, though some of them must have suspected that I was intoxicated."-New. York Sun, Dec. 26.

Liquor-drinking in Scotland has been told a blunt truth by the Lord Provost of Glasgow: that the loss of £5,000,000 which has fallen on the shareholders of the City o Glasgow Bank represents but its six months expenditure for strong drink. He then indicates to his countrymen who are devising means to relieve the calamity, that they could wipe it off by reducing their liquor bills one half for a year. What if they should make a clean sweep, and with heroic selfeacrifice give up the other half !

WOODCUTTER WILLIAM .- A firm in Sheffield recently abandoned the design of the oldfashioned traditional sort of axe and adopted the form of the American axe. A specimen of the improved axe was sent to Mr. Gladimplement and praising its qualities. time.

THE OLDEST FRONTIER TOWN .- The advance vessel of La talle's exploring expedi- will immediately "run" into a fine, clear tion entered the Niagara River on December glue, which can be applied at once to the 6th, 1678-200 years ago last month. was a few days later that Father Hennepin tine, cannot be obtained, the best quality of first visited the Falls. At that time-200 years ago this week-the river was so full on hubby's happiness: "When I am marry- of running blocks of ice that La Balle feared pair of scissors. the destruction of his vessel at Lewiston, where the expedition began the erection of a building. Lewiston may, therefore, claim in Newton Centre, Mass., printed the first I always advise her to be the neck, and twist to be the pioneer town of the frontier-200 edition of "Uncle Tom's Cabin," of which years old .- St. Kitt's News.

Whate'er Your Lot.

Whate'er your lot in life may be, Let sweet contentment rule; Though joy's or sorrow's cup ye pree, Ye maunna play the fule. Your crosses aye will seem a ban, But never o' them tire; Fouk aft forsake the fryin' pan An' fa' into the fire.

Our sorrows are but shaded joys An' come to gi'e us sense, To mak' us men aye humbly wise An' free frae a' pretence. When lashed wi' care, wi' few to cheer, Relief ye fain desire, Ne'er lea' your fryin' pan for fear Ye fa' into the fire.

An' hae a faut or twa; Ne'er lichtly her although ye see Anither rich and braw. The cotward sicht is a' ye scan, The inward yeacquire: Sae mony left their fryin' pan To fa' into the fire. Ye canna see the licht ayont

The lass ye lo'e may humble be

The cloods that hide your way; A gleam may come and bear upon't, The hope for which ye pray. Whate'er your ills, be sure ye get Nae mair than ye require; Sae bear them a' without a fret An' shun some ither fire. WILLIAM ALLAN.

Sunderland.

A Division in the House of Commons.

The division proper is a curiously-managed

ceremony-very roundabout in the estimate of many persons. After the Speaker has cried "order, order!" the Sergeant at-Arms, with his doorkeepers and messengers, close and lock all the doors leading into the lobbies, corridors, passages, etc. No member cutside can enter, nor can any within make their exit; the number within the chamber is thus strictly definite, and all must vote. Until 1836 it was the custom for one party or section to go into a lobby, while the other remained in the house; but since that year the ayes have been directed to pass into the lobby at the Speaker's right hand, while the nays walk into the lobby at his left. The Speaker names members to act as tellers, selected impartially from among the supporters and opponents of the motion, two each; and the members named are not allowed to shirk the duty. They place themselves at the lobby doors, two and two, each to check the counting of the other. Two clerks, as well as two tellers, are placed at each door, holding alphabetical lists of all the members of the house printed on large sheets of stiff pasteboard or cardboard. As the members return into the house from the lobbies the clerks mark off the names, while at the same time the tellers count the total number without noting names. (If any one is disabled by infirmity from entering and quitting the lobbies, he is counted at his seat in the house.) When all have re-entered from the lobbies the four tellers approach the table; one of them, belonging to the majority on this particular question, announces the numbers, and when the Speaker has indorsed or sanctioned this announcement, the important but slowly-managed ceremony ends-often amid loud cheers from those members who constitute the majority on that particular occasion. A member sometimes half parlor, half boudoir-in West Twenty- goes into the wrong lobby through inadverfourth street. A bright coal fire burned on | tence; then there is no escape for him; nothe hearth, and lit up the room and its lens volens his vote is recorded according appointments with a cheerful, ruddy glow. to the lobby in which he finds himself. Dur-By the light was revealed Christmas ferns ing the past sessions, instances of such and greens, a dressing table loaded down misadventure were not unfrequent. Instances with costly knick-knacks in gold, silver and have been known in which even a cabinet velvet, pictures, bric-a-brac, and bijouterie, minister's vote is recorded on the side which heaped together in artistic confusion, he really intended to oppose-much to his own and last, but by no means least, mortification. A member thus awkwardly the mistress of all this inviting dis- placed usually takes some mode of making order. She sat by the fire, in evening the facts known to his constituents and the dress, and toyed with the ears of a sleek public; but the official record remains unlittle terrier, who snapped viciously at the alterable. It has occasionally happened that new-comer from behind the folds of her only one member approves of a particular question or motion; he is the only aye; and " I had a narrow escape indeed," she said, as he is not allowed to count himself, the " although it was not so much the poor den- house at once decides that "the nays have tist's fault. He has given me laughing gas it." Many sessions ago a stranger was descried frequently before; but last Monday I was out | in one of the lobbies after the door had been of sorts and very nervous, and I suppose I closed, and was counted by two of the tellshould not have gone to him at all. I had a ers; but the clerks found him out and rewisdom tooth which had troubled me greatly, ported the case to the Speaker, who duly

> Scientific Intelligence. Great interest has been excited in scien-

tific circles in England by the startling announcement that Mr. Norman Lockyer, the well known astronomer and spectroscopist, has realized a portion at least of the dream of the alchemists, in the transmutation of one metal into another. Mr. Lockyer has not yet himself made the discovery public, though Paris Academy of Sciences, and is preparing Society. The statement is that, by the aid has, in the presence of some of the most eminent English chemists, volatilized copper within a glass tube, dissolved the deposit of the spectroscope, that the solution no longer contained copper, but calcium. The experiment was repeated with other metals with corresponding results, nickel being transmuted into cobalt. Assuming the absence of experimental error, two conclusions only are possible—that the substances hitherto assumed to be elementary are in reality allotropic modifications of one primordial substance, by that all spectroscopic analysis hitherto relied on as absolutely trustworthy must be altogether abandoned. It is not stated that the results were tested by ordinary chemical reactions. In either case there has been none among the many chemical and physical discoveries of recent years more pregnant with results for the future of science than this, should its accu racy be confirmed.

A convenient form of portable glue is given by Mr. Cherrill and is based upon the use of shredded gelatine. A small portion of this stone, from whom the inevitable postal card is placed in a wide-mouthed bottle, to which was received, acknowledging receipt of the a little water and about one-fourth part of The glacial acetic acid are to be added. The gelafirm now does a good business with what | time will swell up into worm-like pieces and has been called the "Gladstone Axe," orders | will be quite elastic. It will keep in this coming in for twenty to thirty dozens at a condition indefinitely when properly prepared. When required for use, take a small portion of the swelled gelatine and warm the end of it in the flame of a match or candle and it article to be mended. If the shredded gelawhite glue may be soaked for a short time in water and then cut up into thin strips with a

> Mr. George Curtis Rand, who died recently 300,000 copies have been issued.